

Note: Enter "NA" wherever data are not applicable or not available for the program under review.

Program Characteristics

Academic Program Name: Respiratory Therapy

Degree: Bachelor of Science (B.S.) and Associate of Applied Science (A.A.S.)

Program CIP Code: AS: 51.0812 / BS: 51.0908

School and Department: School of Health Professions-Department of Allied Health and Social Work

Time frame for this review: 2014/2015 - 2018/2019

Date of last internal review: June 2014

Current date program reviewed for this report: Spring 2020

Program Goal Statement and Student Learning Outcomes

Program goal statement:

The Associate of Applied Science in Respiratory Therapy program contains a sequence of courses designed to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by Registered Respiratory Therapists.

Program graduates will be competent to assist physicians in the evaluation, diagnosis, and treatment of patients with cardiopulmonary dysfunction. Associate students are expected to successfully complete the national certification and registry examinations to earn their credentials. The bachelor's completion program fosters critical thinking and encourages professional leadership and development.

- **GOAL #1**: Upon completion of the program, the student will demonstrate the ability to comprehend, apply, and evaluate clinical information relevant to his or her role as a Registered Respiratory Therapist.
- **GOAL #2**: Upon completion of the program, the student will demonstrate technical proficiency in all skills necessary to fulfill the role as a Registered Respiratory Therapist.
- **GOAL #3**: Upon completion of the program, the student will demonstrate professional behavior consistent with the employer's expectations for a Registered Respiratory Therapist.



Program goal statement:

The Bachelor of Science degree program contains a sequence of courses designed to prepare graduates with critical thinking skills and knowledge above what is attained in the associate degree program. The comprehensive curriculum will allow the students to become successful communicators, critical thinkers, and conscientious leaders. The program will prepare the students for additional certifications and advanced degrees in respiratory therapy and beyond.

- Goal # 1: Obtain additional knowledge with more time for in-depth study in clinical specialties with a broad range of topics including neonatal care, management, long term care, critical care, research, and education.
- Goal # 2: Enhanced communication skills resulting from requiring more written papers and presentations. Courses challenge students to tackle issues from multiple perspectives, helping them identify and tailor messages to varied audiences.
- Goal # 3: Increased career opportunities. Employers recognize the additional tools of graduates with bachelor's degrees and weigh this when making promotion decisions.
- Goal # 4: Increased confidence and recognition. The Bachelor's degree allows others to recognize the graduate's additional skills and value at work. This serves as an additional qualification to apply for advanced positions.

Program outcomes:

The Associate of Applied Science in Respiratory Therapy program at Dalton State College will produce graduates who will be able to:

- Obtain satisfactory scores on the Respiratory Therapy Certification Exam.
- Obtain satisfactory scores on the Respiratory Therapy Registry Exam.
- Graduate on time. (program retention rates)
- Find employment in respiratory care. (graduate-job placement rates)
- Express satisfaction with the respiratory education, knowledge, and skills they receive. (graduate-program satisfaction survey results)
- Satisfy the demand for qualified, skilled, proficient respiratory therapists in the clinical settings.
 (employer satisfaction survey results)

The Bachelor of Science degree in Respiratory Therapy will produce graduates with:

- Skills and knowledge above what is attained in the associate degree program.
- Successful communication skills.
- Critical thinking skills.
- Conscientious leadership skills.
- The ability to pursue advanced degrees in respiratory therapy.



Student learning outcomes:

- *Students completing the Associate of Applied Science Degree Respiratory Program will demonstrate knowledge and application of:
 - medical terminology and abbreviations needed by the respiratory profession.
 - basic respiratory care skills in modalities such as oxygen, humidity, bland aerosol, medicated aerosols, passive hyperinflation, chest physiotherapy, postural drainage and airway clearance therapies.
 - concepts and techniques of patient assessment through inspection, palpation, percussion, and auscultation. The student will demonstrate proficiency in patient physical examination, arterial blood gases, bedside pulmonary function studies, and basic EKGs.
 - the indications, contraindications, hazards, and routes of administration and correct dosages for all classes of respiratory drugs.
 - anatomy and physiology of the cardiac and pulmonary systems; and the mechanisms of homeostatic control for acid/base balance, ventilation, gas transport, and circulation.
 - critical care modalities of airway management and positive pressure ventilation including tracheal suctioning, endotracheal intubation, tracheostomy care, and management of mechanically ventilated patients.
 - respiratory care modalities and concepts specifically related to the pediatric and neonatal patient.
 - the etiology, clinical manifestations, diagnosis, therapeutics, and prognosis of acute and chronic diseases of the cardiopulmonary patient.

*Students completing the bachelor's- level program will increase their knowledge base in:

- the assessment, evaluation, identification, and utilization of critical skills and procedures used in the neonatal and pediatric setting.
- management of the airway, advanced modes of mechanical ventilation, pharmacology and respiratory diseases and disorders.
- providing supervision, clinical education and mentoring.
- the concepts and procedures in geriatric and long term care along with disease and disaster management.
- research and evidenced-based medicine.
- management of a Cardiopulmonary Department.



Brief Assessment of Previous Program Review

Outcome of previous program review (brief narrative statement).

The AAS respiratory therapy program has been very successful in terms of outcomes. The program has well-prepared students due to the excellent faculty teaching in the Science

Core classes that the students must complete before acceptance into the respiratory program. We have excellent working relationships with our area hospitals that host our students in clinical education. We have representatives from each hospital on our advisory board committee who have given us valuable feedback on program goals, learning outcomes and students in general. We have well-trained faculty teaching in the program that are dedicated to excellence. We have an outstanding medical director with a real interest in the program and our students and takes time out of his busy schedule to rotate students through both his medical practice and on rounds in the hospital. We have a proven record in the geographic area of Dalton State College in graduating quality respiratory therapists who meet the ever changing demands of the profession.

This is the first review of the BS in Respiratory Therapy program.

What improvements have occurred since the last program review or assessment?

The Health Professions building underwent a major renovation allowing for new classrooms, technology and laboratory space as well as new office space for the Respiratory Therapy program. A new Simulation Laboratory opened in the Health Professions building. In the simulation lab, students can use their skills without causing harm to a real person. By switching roles in the sim lab, the students also develop teambuilding skills with their colleagues.

Through educational grants the RT department received new equipment including a Metaneb device, which is indicated for lung expansion and mobilizing secretions; the vest cpt device for secretion clearance; and a Vapotherm, which provides high flow oxygen delivery. The department also purchased a portable pulmonary function machine and three new patient beds. These new modalities allow students to stay up to date with current technology in the respiratory field. Additional clinical sites were also added, totaling 14 separate locations. Students have a wide variety of clinical experiences. The Trajeceys clinical tracking and assessment system was implemented to track real-time student attendance, document skills and competencies, and provide evaluations and surveys for our students and preceptors. In 2017, the program received CoARC accreditation for the maximum timeframe of ten years.

The BS completion program began accepting students into classes Spring Semester 2015. This program was approved by the Board of Regents in the Summer of 2014. The program continues the education of associate degreed Respiratory therapists and prepares them for the emerging and changing roles in respiratory therapy.



What changes or revisions have been made to the program, its curriculum, or its program/student learning outcomes since the last program review? Please include a follow-up discussion of the previous review's action plan?

There have been no major changes to the associate degree program curriculum since the last review. We added a Comprehensive Kettering Review for the Board Exams in the Credential Prep class for our second-year students.

The BS completion program was approved by the Board of Regents in the summer of 2014 and began accepting students into classes Spring Semester of 2015. The completion program continues the education of the associate degree Respiratory Therapists and prepares students for the emerging roles in respiratory therapy. The program began as face-to-face classes but quickly transitioned to a hybrid format and then to completely online classes at the request of the student population. All students in the program are working therapists who are unable to attend daytime classes.

Enrollment	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	% Change
Headcount	56	62	36	20	18	-67%
FTE	20.31	28.31	19.25	9.68	5.91	-70%
Enrolled Full-time	18	26	18	9	5	-72%
Enrolled Part-time	38	36	19	11	13	-65%
Female	45	46	28	15	12	-73%
Male	11	16	9	5	6	-45%
Alaskan Native/Native American/American Indian						
Asian, Hawaiian, Other Pacific Islander	1	2	2		1	200,000
Black/African-American	2	5	2	1		*******
Hispanic	16	18	14	1	5	-68%
Multi-racial	3	1	1	8		5%
Undeclared	2	2	1			2371-23200
White	32	34	17	10	12	-62%



Enrollment	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	% Change
Headcount	11	6	10	27	23	109%
FTE	5.34	1.125	5.29	11.73	3.875	-20%
Enrolled Full-time	5	1	5	11	3	-40%
Enrolled Part-time	6	5	5	16	20	233%
Female	6	4	9	22	19	216%
Male	5	2	1	5	4	-20%
Alaskan Native/Native American/American Indian						
Asian, Hawaiian, Other Pacific Islander				1	1	Sanana
Black/African-American	1			2	1	-50%
Hispanic				2	1	-50%
Multi-racial				3	3	U.S. DAVIS
Undeclared				1	1	X =0=0=
White	10	6	10	18	16	60%

Analysis and comments on student demographics.

The Associate of Applied Science Respiratory program has traditionally been a mostly white, female population. The decrease in full-time enrollment has to do with the number of credit hours required each semester. In each of the 5 semesters of the program, credits range from 9-11 hours. The Associate of Applied Science in Respiratory Therapy program is limited to 15 incoming freshmen students. Students enter the program in the Fall and complete the program in 5 semesters. This means there are a maximum of 15 freshmen and 15 sophomore students rotating through the program at any one time. For financial aid purposes students, are now being classified as "Associate of Applied Science" rather than being designated as Respiratory Therapy majors. This is represented by the artificial decline in enrollment.

The Bachelor of Respiratory Therapy program is a mostly white, female population. The program has steadily increased enrollment with the majority of students enrolled part time.



Faculty Indicators of Program Quality	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
School (not Department) faculty teaching in program						
Full-time program faculty	3	3	3	2	2	-20%
Part-time program faculty				1	1	
Total program faculty						
Percent of program classes taught by full-time program faculty	100	100	100	100	71	
Gender (full-time and part-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 217	Fall 2018	% Change
Male	1	1	1	1	1	
Female	2	2	2	2	2	
Race/Ethnicity (full-time and part-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Alaskan Native/Native American/American Indian						
Asian, Hawaiian, Other Pacific Islander	1	i 				
Black/African-American						
Hispanic						
Multi-racial			<u> </u>			
Undeclared						
White	3	3	3	3	3	
Tenure Status (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Tenured	1	1	1	1	1	ST. 120
On-tenure track	1	1	1	1	1	(444444)
Non-tenure track	1	1	1	1	1	2000 mm
Rank (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Professor	1	1	1	1	1	(TENTER)
Associate Professor		1-00000000000				
Assistant Professor	1	1	1	1	1	3
Instructor/Senior Lecturer/Lecturer	1	1	1	1	1	



Faculty Indicators of Program Quality							
Highest degree (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change	
Doctorate							
Specialist	1	1	1			******	
Master's	1	1	1	1	1		
Bachelor's	1	1	1	1	1		
Associate's/Other							

Provide additional details, analysis, and comments regarding faculty indicators of program quality.

The faculty number has increased since the program began. The original program had two full-time professors. When the BS program began, an additional professor was added to make three. The Program Director retired in 2017 and became a part-time faculty. The BS instructor moved into the Program Director position. The Clinical Educator resigned in 2017 and a new Director of Clinical Education was hired. This made the total number of faculty 2.5. The part time faculty member is tenured and has a specialist degree. The Program Director has a Master's degree and is on tenure track. The Clinical Educator obtained her master's degree in December of 2019.

There are four classes in the AS Program that are taught by part time faculty. (Beginning Fall 2017) The other ten classes in the AS respiratory program are taught by full time faculty. All six classes in the BS Program are taught by full time faculty. (Begin 2015)

Indicators of Measures of Quality							
Student Input	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change	
Mean ACT score (Associate's Degree)	19.26	18.44	18.77	18.66	20.42	6%	
Mean SAT score (Associate's Degree)	415	421	430	436	468	13%	
Mean ACT score (Bachelor's Degree)		-	23.15	20.17	19.26	-17%	
Mean SAT score (Bachelor's Degree)	492.	480	490	470	472	- 4%	

If applicable to your degree program, provide any additional external quality assurance data/information or results (e.g., professional accreditation results, National Survey of Student Engagement [NSSE], market rankings, etc.). The Online BS Completion program received the "most affordable Bachelor's Degree program" award by Intelligent.com.



Student Output	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Exit scores on national/state licensure (If applicable)	100% pass	100% pass	100% pass	100% pass	93% pass	-14%
Graduating majors' mean GPA (Associate of Science)	3.27	3.40	3.51	3.45	3.28	.3%
Graduating major's mean GPA (Bachelor of Science)		3.76	3.44	3.50	3.34	-11%
Employment rate of bachelor's-degree graduates/Entering graduate professional programs	100%	100%	100%	100%	100%	
Number of students entering graduate/professional programs: Note: These percentages are not separated from the employment percentages.	n/a	n/a	n/a	n/a	n/a	n/a

Describe the extent to which students have achieved current Program Outcomes

Class graduated in	2015	2016	2017	2018	2019
# of grads	8	9	12	12	13
Attrition Rate	0	0	0	14%	.06%
Positive Job Placement	100%	100%	100%	93%	100%
CRT Credentialing Success	100%	100%	100%	100%	100%
RRT Credentialing Success	100%	100%	100%	93%	100%
Overall Employer Satisfaction					
Via annual survey	100%	100%	100%	100%	100%
Overall Graduate Satisfaction					
Via Annual Survey	100%	100%	100%	100%	100%
On-Time Graduation					
Rate	100%	100%	100%	100%	100%

The respiratory therapy program has been very successful in terms of outcomes. We have one of the highest pass rates on the RRT credentialing exam in the nation. We have been awarded the prestigious Distinguished *RRT Credentialing Success* Award by the Commission on Accreditation for Respiratory Care for the past 7 years- from 2013-2019. In selecting programs for this recognition, the CoARC Board used objective criteria



based on key accreditation metrics documented in the Annual Report of Current Status (RCS). These programs were required to (1) have three or more years of outcomes data; (2) hold accreditation without a progress report; (3) document RRT credentialing success of 90% or above, and (4) meet or exceed established CoARC thresholds for CRT credentialing success, attrition and positive (job) placement.

Indicators of Measures of Quality

If available, provide additional information and/or results of other indicators of quality related to student output such as completer satisfaction surveys, employer satisfaction surveys, stakeholder satisfaction surveys, completion and continuation rates, attrition rates, starting salaries of graduates, etc.

*See the 2020 CoARC Report with data from this reporting period.

<u>Describe efforts undertaken to achieve and maintain curricular alignment within the program and currency to the discipline.</u>

The faculty continually pursue education and professional development. Continuing education requirements include 42 credit hours every 2 years for the Program Director and Clinical Educator to maintain licensure in the states of Georgia and Tennessee.

Indicators of Measures of Viability

Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
56	62	37	20	18	-67%
11	6	10	27	23	109%
n/a	*				
n/a					
100	100	100	71	71	-29%
	56 11 n/a n/a	56 62 11 6 n/a n/a	56 62 37 11 6 10 n/a n/a	56 62 37 20 11 6 10 27 n/a n/a	56 62 37 20 18 11 6 10 27 23 n/a n/a

Describe additional details as deemed appropriate.

For financial aid purposes students are now being classified as "Associate of Applied Science" rather than being designated as Respiratory Therapy majors. This is represented by the artificial decline in enrollment. The bachelor's degree program has seen a steady increase in enrollment with the majority of students enrolled part-time.



Indicators of Measures of Productivity						
Graduation	2014-15	2015-16	2016-17	2017-18	2018-19	% Change
Number of degrees conferred (bachelor's)	0	2	5	2	2	200000
Number of degrees conferred (associate's)	13	14	12	15	13	
Total student credit hours earned (bachelor's)		112	139	163	146.5	31%

107

116

113

115

4%

Describe any institutional-specific factors impacting time to degree.

Total student credit hours earned (associate's)

There are no factors that prohibit the RT majors from completing the pre-requisites in a timely manner and they are ready to begin the admission process.

BS students must be RRT with an Associate Degree in Respiratory Therapy to begin the completion program which is online.

The course load for the Associate of Applied Science Program is 47 yearly credit hours. The Bachelor's Completion Program is comprised of a total of 122-123 credit hours with 18 hours of upper-level Respiratory classes and 12 hours of health administration classes.

Evidence of Program Viability

Based on evidence from <u>ALL of the above</u> information, data, and analysis, discuss whether continued resources should be devoted to this program. <u>This discussion must be evidence-based.</u> Your comments should consider external factors and address questions such as the following: Are your students getting jobs? What is the job outlook for graduates? Are students prepared for the jobs they get? How is the field changing? Are program faculty members in contact with employers and getting back feedback on graduates' job performance? Do employers state or suggest a need for changes in the program?

It is evident from our program outcomes, employer surveys, awards received, and student satisfaction surveys that our programs are successful. As stated before, we have 100% placement rates and 100% employer satisfaction.

Our students are filling job positions in and around our community. Students are currently employed at Hamilton Medical Center, Dalton, Ga.; Floyd Medical Center, Rome, Ga.; Erlanger Medical Center, Chattanooga, Tenn.; Advent Health, Calhoun and Chatsworth, Ga.; Kennestone Wellstar, Marietta, Ga.; Memorial Hospital in Chattanooga, Tenn.; and Standifer Place, Chattanooga, Tenn. These sites are all within 70 miles of the college. According to the Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, September 2019 Edition, the Employment of respiratory therapists is projected to grow 21 percent from 2018 to 2028, much faster than the average for all occupations. Growth in the middle-aged and



older population will lead to an increased incidence of respiratory conditions such as pneumonia, chronic obstructive pulmonary disease (COPD), and other disorders that can permanently damage the lungs or restrict lung function. The aging population will, in turn, lead to an increased demand for respiratory therapy services and treatments, mostly in hospitals. In addition, a growing emphasis on reducing readmissions in hospitals may result in more demand for respiratory therapists in nursing homes and in doctors' offices. Advances in preventing and detecting disease, improved medications, and more sophisticated treatments will also increase the demand for respiratory therapists. Other conditions affecting the general population, such as respiratory problems due to smoking and air pollution, along with respiratory emergencies, will continue to create demand for respiratory therapists.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Respiratory Therapists, on the Internet at: https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm

By 2030 the United States is predicted to have a shortfall of 1,300 to 12,000 cardiologists and pulmonologists. As identified by the Centers for Disease Control and Prevention, three of the top five leading causes of death are diseases of the cardiopulmonary system. Combining these problems with the aging population in the United States obligates leaders of the healthcare system to identify new and innovative solutions for providing care to patients in the future.

In 2015, the American Association of Respiratory Care Board of Directors charged the Committee on Advanced RT Practices, Credentialing, and Education with exploring the development of an Advanced Practice Respiratory Therapist. Members of this committee include representatives from the American Association of Respiratory Care, National Board of Respiratory Care, and CoARC. The committee has focused on determining the educational requirements, the scope of practice, professional credentialing, and state requirements for the Advanced Practice Respiratory Therapist.

Compelled by patient need and supported by the findings of this collaborative group, the following scope of practice was developed for, and ratified by, the AARC Board of Directors.

The AARC's Board of Directors recently completed a scope of practice document for the Advance Practice Respiratory Therapist .https://www.aarc.org/wp-content/uploads/2020/01/BOD-APRT-Scope-of-Practice.pdf

Program Strengths and Weaknesses

Based upon this review, what are the strengths and weaknesses of the program?

The program has been fortunate to have well-prepared students due to the excellent faculty teaching in the Science Core classes that the students must complete before acceptance into the respiratory program. Our department has excellent working relationships with area hospitals that host students in clinical education. There are representatives from each hospital on our advisory committee that have given us valuable feedback on program goals, learning outcomes and students in general. We have well-trained faculty teaching in the program that are dedicated to excellence. The program



Medical Director has a real interest in our students and takes time out of his busy schedule to rotate students through his medical practice and on rounds in the hospital.

We have a proven record in the geographic area of Dalton State College that we graduate quality respiratory therapists that are able to meet the ever changing demands of the profession.

Weaknesses and concerns:

As the landscape of practice changes there has been a push for RTs who have bachelor's degrees. This year marks the beginning of the Advanced Practice Respiratory Therapy degree which is comparable to the Nurse Practitioner or Physician Assistant. To apply for this program, which is a master's level program, students will need to have a BS degree. To address the issue of enrollment in the Bachelor of Science Completion Program here is a summary of the most recent official statement from the American Association of Respiratory Care:

Official Statement from the AARC:

In 2015, The American Association for Respiratory Care called for 80% of RTs to either have, or be working toward, a bachelor's degree by 2020. The Commission on Accreditation of Respiratory Care has proposed a new standard stating that all RT programs created on or after Jan. 1, 2018 must offer a bachelor's degree or above. The Respiratory Care profession has been built by clinicians with associate degrees, and associate degrees will continue to be offered by existing programs across the country but in order to succeed in 21st century health care, RTs need to keep pace with their colleagues in nursing and other disciplines, where a bachelor's degree or higher is becoming the norm.

When the Dalton State program began in 2015, the AARC statement was published, and we anticipated that students who finished the Associate Degree would obtain their Registry and come back the following Fall to complete the BS degree. We have seen that this may not be the case because students take a few weeks or months to study after graduation and the lack of testing site availability has also lengthened the time to take the two exams required to become a Registered Therapist. Another factor that comes into play is that tuition reimbursement for most hospitals does not occur until a therapist has been employed for six months. It may be worth exploring the possibility of moving the associate degree program to a bachelor's degree program in the near future.

Recommendations for Follow-Up and/or Action Plans (if needed)



Issue/Concern:

Recruitment of students for the associate and bachelor's degree programs will be a focus for the future.

Specific action(s):

- Work with the Department of Marketing and Communication, the School of Health Professions and local high school health professions programs to showcase and promote the RT profession.
- Attend all on campus outreach events to attract the current student population.
- Reach out to local respiratory therapists and the 16 hospitals where we attend clinical rotations to promote the Bachelors Completion Program.

Expected outcomes:

Improvement in volume and quality of students who apply to both programs.

Time frame for achievement:

Continuous and on-going

Person(s) responsible:

Program Director and Clinical Educator

Resources needed:

- Marketing assistance to increase exposure for both programs.
- Creation of new brochures to distribute to Dalton State students, local hospitals and high schools.

Prepared by Cindy Davis	
Signature Amdy Davis	Date:07/27/2020
Dean's Approval:	
Juna M. Kertulis-Jartar	
Signature:	Date: <u>07/27/2020</u>
Approval of the Chair of the DSC Comprehensive Program Review Committee:	Date: 7/27/2020
Signature:	Date:



Vice President of Academic Affairs (VPAA) Categorical Summation:

Check any of the following to categorically describe action(s) the institution will take concerning this prograi
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Program MEETS Institution's Criteria
Program is critical to the institutional mission and will be retained.
\square Program is critical to the institutional mission and is growing, or a high demand field, and thus will be enhanced.
☐ Program DOES NOT MEET Institution's Criteria for continuation.
\square Program will be placed on monitoring status.
☐ Program will undergo substantive curricular revisions.
☐ Program will be deactivated.
☐ Program will be voluntarily terminated.
☐ Other (Please elaborate):
VPAA Signature:

Bruno Hicks

Provost and Vice President for Academic Affairs

Dalton State College