



COMPREHENSIVE ACADEMIC PROGRAM REVIEW

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

Program Characteristics

Academic Program Name: **General Studies**

Degree: **Associate of Science (A.S.)**

Program CIP Code: **24.0101**

School and Department: **School of Science, Technology & Mathematics**

Time frame for this review: **2014/2015 – 2018/2019**

Date of last internal review: **2014**

Current date program reviewed for this report: **Fall 2019**

Program Goal Statement and Student Learning Outcomes

Program goal statement:

Students completing the A.S. in General Studies will engage in coursework that provides the foundational knowledge and skills that will enable them to be successful in pursuing further academic or professional goals.

The A.S. in General Studies is designed for students undecided on a particular field of study, students planning to pursue majors not offered at Dalton State, students planning to transfer to other schools in the University System of Georgia, private or out-of-state institutions, or students who wish to earn the general associate's degree only. The coursework allows students to explore a variety of subjects toward selection of an academic major for further academic pursuits or toward acquisition of career skills for entering or advancing in the workforce.

Program outcomes:

1. Broad-based education and skills: Students will utilize academic knowledge from a variety of STM disciplines for critical thinking, problem solving, and effective scientific communication skills.
2. Satisfaction with the General Studies program: Students in the program will express satisfaction with the quality of instruction in science, technology, and mathematics courses.
3. Graduates will be successful: Graduates of the A.S. in General Studies program will continue their education in a bachelor's program or find meaningful employment.

Student learning outcomes:

1. Students will apply science concepts using appropriate scientific language.
2. Students will demonstrate knowledge and principles of the biological and/or physical sciences through hypothesis testing and draw justifiable conclusions.
3. Students will calculate numerically and symbolically to solve a problem.
4. Students will interpret and communicate information presented in various mathematical forms.



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Brief Assessment of Previous Program Review

Outcome of previous program review (brief narrative statement).

The previous program review of the A.S. in General Studies concluded that it was a viable program with enrollment numbers for that review period consistently over 100. All courses taught in the program are part of the general education curriculum and therefore require no additional resources. The A.S. in General Studies also serves as a source of transfer students for DSC bachelor's degrees as well as for other schools in the University System of Georgia (USG).

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

Changes effected at the System level now allow Area F to be satisfied with 18 credit hours chosen from Areas B-F (not including courses used to satisfy Area B-F degree requirements). This change allows more flexibility in the program resulting in fewer losses of credit and lessening the impact on time to degree for students who change majors.

The A.S. in General Studies also includes two new pathways: Physics/Pre-Engineering Pathway (REPP) and Computer Science Pathway.

Students completing the Physics/Pre-Engineering pathway at Dalton State may transfer to one of the five REPP (Regents Engineering Pathway Program) institutions, four within the University System of Georgia and one private institution (Georgia Institute of Technology, University of Georgia, Kennesaw State University, Georgia Southern University, and Mercer University). Students must complete all required courses as specified by DSC before successfully transferring. REPP students will complete the first two years of the engineering degree at Dalton State before transferring to one of the REPP institutions to complete the Bachelor of Science degree in engineering.

The Computer Science pathway allows students to grasp the fundamental concepts of computers and how they affect the world around us. Understanding the many characteristics of computing has become a necessary skill. This pathway develops a strong foundation of knowledge and skills necessary to succeed in computer science or to pursue a higher degree. It incorporates practical and theoretical approaches to key aspects of computer science such as programming languages, operating systems, data structures and software engineering. These courses, along with the math and problem solving skills, represent the foundation to meet current and future industry needs.

Dalton State College now has an articulation agreement with the University of Tennessee at Chattanooga for students wanting to pursue engineering or computer science. Similar to the REPP, while at Dalton State, students can take courses required for an engineering or computer science degree as outlined in the articulation agreement and then transfer to UTC to complete their bachelor's degree.

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?

Changes effected at the System level now allow Area F to be satisfied with 18 credit hours chosen from Areas B-F (not including courses used to satisfy Area B-F degree requirements).

Program outcomes and student learning outcomes have been modified since the last review.



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Student Demographics

Enrollment	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Headcount	105	137	136	158	152	44.8%
FTE	94	122.9	121.9	139.08	129.16	37.4%
Enrolled Full-time	81	96	98	100	91	12.3%
Enrolled Part-time	24	41	38	58	61	154.2%
Female	55	68	71	76	84	52.7%
Male	50	69	65	82	68	36%
Alaskan Native/Native American/American Indian	0	2	0	1	0	¹ DNE
Asian, Hawaiian, Other Pacific Islander	1	1	3	3	2	100%
Black/African-American	1	1	5	5	3	200%
Hispanic	23	41	41	44	54	134.8%
Multi-racial	6	6	3	5	3	-50%
Undeclared	6	8	1	1	4	-33.3%
White	68	78	83	99	86	26.5%

Analysis and comments on student demographics.

Overall enrollment in the program increased by 44.8% (37.4% for FTE). Looking more closely at the demographics above, full-time enrollment has remained relatively steady with the increase coming from the part-time enrollment. In terms of ethnicity, enrollment of Hispanic students has more than doubled (up 134.8%) during the review period with enrollment of white students increasing 26.5%. Enrollment of students of other ethnic and racial groups involves very small numbers of students making any meaningful determination impossible. The ratio of male students to female students has fluctuated each year during the review period.

¹DNE is a mathematical abbreviation for "Does Not Exist" often used for undefined expressions or when a proper solution does not exist.



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Faculty Indicators of Program Quality	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
School (not Department) faculty teaching in program (excluding Areas A through E)	62	57	59	63	62	0
Full-time program faculty	45	44	45	45	46	2.2%
Part-time program faculty	17	13	14	18	16	-5.9%
Total program faculty	62	57	59	63	62	0
Percent of program classes taught by full-time program faculty	91%	93%	93%	88%	90%	-1%
Gender (full-time and part-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Male	37	36	36	37	35	-5.4%
Female	25	21	23	26	27	8%
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	0	0	0	0	0	DNE
Asian, Hawaiian, Other Pacific Islander	1	1	1	1	2	100%
Black/African-American	2	2	2	2	3	50%
Hispanic	1	1	0	0	1	0
Multi-racial	0	0	0	0	0	DNE
Undeclared	2	3	3	2	2	0
White	56	50	53	58	54	-3.6%
Tenure Status (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Tenured	22	25	28	29	30	36.4
On-tenure track	20	16	13	14	14	-30%
Non-tenure track	3	3	4	2	2	-33.3%
Rank (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Professor	7	8	10	11	11	57%
Associate Professor	20	22	21	21	19	-5%
Assistant Professor	15	11	10	11	14	-6.7%
Instructor/Senior Lecturer/Lecturer	3	3	4	2	2	-33.3%



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Faculty Indicators of Program Quality

Highest degree (full-time faculty)	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Doctorate	38	36	38	38	39	2.6%
Specialist	0	0	0	0	0	DNE
Master's	6	6	5	5	5	-16.7%
Bachelor's	1	2	2	2	2	100%
Associate's/Other	0	0	0	0	0	DNE

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

The number of faculty teaching in the A.S. in General Studies program has remained basically unchanged during the current review period with generally about 90% of program classes being taught by full-time faculty. While the faculty has a 60/40 male/female ratio, it is not very racially/ethnically diverse. However, the stability and quality of the faculty are strengths of the program. An indicator of the stability of the faculty is the percentage increase in the number of tenured faculty with a decline in the number of on-tenure track faculty, as these faculty members earned tenure. Further indicators of the quality and stability of the faculty are the percentage increase in full professors in addition to having 85% of the full-time faculty holding a doctoral degree.



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Indicators of Measures of Quality

Student Input	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Mean ACT score	20.06	19.78	19.62	19.23	19.66	-2%
Mean SAT score	478.80	463.20	449.10	449.80	470.20	1.8%

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.).

During the review period, the mean ACT score decreased slightly while the mean SAT score had a slight increase. Students accepted into Dalton State can self-select into the general studies program since there are no incoming qualification criteria for the program. Once enrolled in the program, both professional and faculty advisors monitor student progress through the program.



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Indicators of Measures of Quality

Student Output	2014-15	2015-16	2016-17	2017-18	2018-19	% Change
Exit scores on national/state licensure (If applicable)	n/a	n/a	n/a	n/a	n/a	n/a
Graduating majors' mean GPA	3.22	3.22	3.09	3.30	3.32	3.31%
Employment rate of graduates (if available)	n/a	n/a	n/a	n/a	n/a	n/a
Number of students entering graduate/professional programs	n/a	n/a	n/a	n/a	n/a	n/a

Describe the extent to which students have achieved current program outcomes during this program review cycle (most recent year).

1. Broad-based education and skills: Students will utilize academic knowledge from a variety of STM disciplines for critical thinking, problem solving, and effective scientific communication skills.

Since the University System set Area F requirements so that they could be satisfied with 18 credit hours chosen from courses in Areas B-F (not including courses used to satisfy Area B-F degree requirements), the A.S. in General Studies and the A.A. in General Studies are now almost identical. To address this program outcome, courses which make the A.S. different from the A.A. were reviewed specifically. These include courses from Area D that are the second part of a lab science sequence and math requirements which are not required in the A.A. program and that address critical thinking, problem solving, and effective scientific communication skills – BIOL 1108 Principles of Biology II, CHEM 1212 Principles of Chemistry II, GEOL 1122 Historical Geology, PHYS 1112 Introductory Physics II, PHYS 2212 Principles of Physics II, MATH 1113 Precalculus. For the 2018-19 year, the percentages of students earning a C or better in these courses are as follows: 84% BIOL 1108, 81% CHEM 1212, 83% GEOL 1122, 82% PHYS 1112, 81% PHYS 2212, and 76% MATH 1113. Success in these courses indicates that students had critical thinking skills, problem solving skills, and effective scientific communication skills.

2. Satisfaction with the General Studies program: Students in the General Studies program will express satisfaction with the quality of instruction in science, technology, and mathematics courses.

The student evaluation average for faculty in the School of Science, Technology, and Mathematics for 2018-19 was 4.303 on a 5-point Likert type scale.

3. Graduates will be successful: Graduates of the A.S. in General Studies program will continue their education in a bachelor's program or find meaningful employment.

This outcome was not assessed during this review period. We will begin collecting these data during 2019-20.

Describe the extent to which students have achieved current student learning outcomes during this program review cycle (most recent year).

1. Students will apply science concepts using appropriate scientific language.

BIOL 1108 Principles of Biology II

Students will demonstrate the ability to evaluate observations, inferences, and relationships in works under investigation.

Target: 50% decrease in incorrect answers from pretest to posttest

Findings: 67% decrease in incorrect answers

CHEM 1211 Principles of Chemistry I

Demonstrate knowledge and understanding of laboratory methodology including data observation, recording, analysis, and reporting.

Target: 50% decrease in incorrect answers on the posttest questions related to laboratory skills

Findings: An average of 25% decrease in incorrect answers on the posttest

PHYS 1111 Introductory Physics I

Students will demonstrate the ability to recognize physical conditions and properties surrounding word problems. Students will demonstrate the ability to symbolize or draw free-body diagrams of physical systems related to word problems.

Target: There will be a 50% decrease in incorrect answers on the posttest questions related to the representation of physical systems.

Findings: The number of incorrect answers on the pretest for this measure was 81.43%. The number of incorrect answers on the post test was 28.57%. The reduction in incorrect answers is 65%, exceeding the target by 15%.

2. Students will demonstrate knowledge and principles of the biological and/or physical sciences through hypothesis testing and draw justifiable conclusions.

BIOL 1107 Principles of Biology I

Students will demonstrate an understanding of the scientific method and apply it to problem solving.

Target: 50% decrease in incorrect answers on the posttest questions related to the scientific method

Findings: 53% decrease in incorrect answers on this measure

CHEM 1211 Principles of Chemistry I

Examine the laws of thermodynamics to predict the spontaneity of chemical processes, including electrochemical processes

Target: 50% decrease in incorrect answers on the posttest questions related to thermodynamics

Findings: Percent decrease in incorrect answers from pretest to posttest $(42 - 19) / 42 = 54.76\%$

3. Students will calculate numerically and symbolically to solve a problem.

MATH 1111 College Algebra

Solve linear, quadratic, polynomial, exponential and logarithmic equations and their applications.



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Target: Incorrect answers will be reduced by 60% from pretest to posttest

Findings: Incorrect pretest answers = 91/201. Incorrect posttest answers = 27/201. Reduction for incorrect answers = $(91-27)/91 = 70\%$

MATH 1113 Precalculus

Use trigonometric functions and Law of Sines and Law of Cosines to solve triangles.

Target: 50% reduction of incorrect answers from pretest to posttest

Findings: 73.14% reduction of incorrect answers

4. Students will interpret and communicate information presented in various mathematical forms.

MATH 1111 College Algebra

Graph and analyze linear, quadratic, polynomial, exponential, and logarithmic functions.

Target: Incorrect answers will be reduced by 50% from pretest to posttest

Findings: Incorrect pretest answers = 41/201. Incorrect posttest answers = 18/201. Reduction for incorrect answers = $(41-18)/41 = 56\%$

MATH 1113 Precalculus

Convert between polar and rectangular coordinates.

Target: 50% reduction of incorrect answers from pretest to posttest

Findings: 56.25% reduction of incorrect answers



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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.

The A.S. in General Studies is a transfer degree, and as such, employer and stakeholder satisfaction and starting salaries of graduates are not particularly relevant. The program is primarily designed for students undecided on a particular field of study, students planning to pursue a bachelor's degree at DSC or at another school in the University System of Georgia, or students planning to pursue majors not offered at Dalton State.

Describe efforts undertaken to achieve and maintain curricular alignment within the program and currency to the discipline.

Prior to 2015, 18 hours of science, technology, and/or mathematics classes were required to satisfy Area F requirements. In 2015, the University System set Area F requirements so that they could be satisfied with 18 credit hours chosen from courses in Areas B-F (not including courses used to satisfy Area B-F degree requirements). This change allows more flexibility in the program resulting in fewer losses of credit and lessening the impact on time to degree for students who change majors.



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Indicators of Measures of Viability

Internal Demand for the Program	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	% Change
Number of students enrolled in the degree program	105	137	136	158	152	44.7%
Number of students who applied to the program (if applicable)	NA	NA	NA	NA	NA	DNE
Number of students admitted to the program (if applicable)	NA	NA	NA	NA	NA	DNE
Percent of classes taught by full-time faculty	91%	93%	93%	88%	90%	-1%

Describe additional details as deemed appropriate.

Enrollment in the A.S. General Studies program increased by 44.7% (37.4% for FTE) during the review period. Even though enrollment in the program has increased, consistently around 90% of program classes are being taught by full-time faculty.



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Indicators of Measures of Productivity

Graduation	2014-15	2015-16	2016-17	2017-18	2018-19	% Change
Number of degrees conferred	8	18	15	27	46	475%
Total student credit hours earned	91.12	89.38	85.46	96.14	77.45	-15%

Describe any institutional-specific factors impacting time to degree.

With the courses in the program being part of the general education core, ample sections of required courses are regularly offered, and flexibility in Area F results in fewer losses of credit and lessens the impact on time to degree for students who change majors. Three department chairs monitor the schedule closely to ensure that students can progress through their programs of study and graduate on time. Additionally, once enrolled in the program, both professional and faculty advisors carefully monitor student progress through the program.



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Evidence of Program Viability

Based on evidence from **ALL** of the above information, data, and analysis, discuss whether continued resources should be devoted to this program. **This discussion must be evidence-based.** 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?

The A.S. in General Studies continues to be a viable program with over 150 students enrolled in the major. During the review period, the number of degrees conferred has increased from 8 to 46, a 475% increase. This program continues to serve as a source of transfer students for bachelor's degrees at DSC and at other schools in the USG. Since the courses taught in the program are part of the general education core, there is no additional cost to DSC to deliver this program. Due to the transfer nature of the program, job outlook information, job status, and employer feedback are not relevant to the assessment of this program.



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Program Strengths and Weaknesses

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

Strengths:

- In addition to the general studies major, the program also has two pathways: Physics/Pre-Engineering (REPP) and Computer Science.
- The program has dedicated, well-qualified, and student-centered faculty.
- Approximately 90% of program courses are taught by experienced full-time faculty.
- All courses taught in the program are part of the general education curriculum and therefore require no additional resources from the College.
- The A.S. in General Studies also serves as a source of transfer students for DSC bachelor's degrees as well as for other schools in the USG.

Weaknesses and concerns:

- No has been collected from graduates concerning their plans to continue their education or seek meaningful employment.



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

Issue/Concern:

Very little data have been collected from graduates concerning their plans to continue their education or seek meaningful employment.

Specific action(s):

Advisors will pull information about students' future plans from their graduation applications.

Expected outcomes:

We will gain a better understanding of the plans and needs of our graduates and be able to be more intentional in recruiting the interested students into our bachelor's programs.

Time frame for achievement:

We will begin collecting data during 2019-20.

Person(s) responsible:

Responsibility will lie with the dean, assistant dean, department chairs, and faculty advisor.

Resources needed:

A data specialist would be helpful.



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Prepared by:

Signature

Joe Ann Nimmons

Date:

12/12/2019

Dean's Approval:

Signature:

Rudell G. G. G.

Date:

12/13/2019

Approval of the Chair of the DSC Comprehensive Program Review Committee:

Signature:

D. Mark M. Helms

Date:

12/12/2019

Vice President of Academic Affairs (VPAA) Categorical Summation:

Check any of the following to categorically describe action(s) the institution will take concerning this program.

Program **MEETS** Institution's Criteria

- Program is critical to the institutional mission and will be retained.
- 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.

- 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:

Adrian L. Epps

Date:

12/16/19

Adrian L. Epps, Ed.D.

Interim Provost and Vice President of Academic Affairs

Dalton State College