

Annual
Program
Of
Engineering, Math,
and Physical Science
For
AY 2019-2020

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Independence
COMMUNITY COLLEGE

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1.0 Program Data and Resource Repository

1.2 Quantitative and Qualitative Data

All programs are provided with the most recent two years of data by the Office of Institutional Research (IR) as well as two-year budget data provided by the Business Office.

The data sets provided by the Office of Institutional Research include the following elements for the most recent two (completed) academic years:

- Number of Faculty (Full Time; Part Time; Total)
- Student Credit Hours by Faculty Type
- Enrollment by Faculty Type
- Faculty Name by Type
- Average Class Size, Completion, and Attrition
- Course Completion, Success and Attrition by Distance Learning v Face-to-Face
- Number of Degrees/Certificates Awarded
- Number of Graduates Transferring (if available from IR)
- Number of Graduates Working in Related Field (technical programs only)
- Expenditures and Revenues

Additional data may also be available for reporting from the Office of Institutional Research, as applicable. Requests for additional data must be made through a data request.

(See Section 1.2 in the Program Review Handbook for more information.)

Quantitative Data (provided by Anita Chappuie)

Engineering, Math, Physical Science Program Review Data AY 2019

Number of Faculty:

full time 3 (Southworth, Saleh, Crompton)

part time 2 (Deweese, Hays)

Enrollment & Student credit hours by Faculty type:

Full time: 25 total credit hours taught; 30 total students enrolled

Part time: 8 credit hours taught; 14 total students enrolled

Average Class size:

5.8 students in Face-to-Face classes

9 students in online classes

6.3 students across all courses

Completion rates:

82.9% face-to-face

66.7% online

79.5% all courses

Pass ('D' or better) rates:

86.2% face-to-face

100% online

88.6% all courses

Pass ('C' or better) rates:

79.3% face-to-face

100% online

82.9% all courses

Number of Majors: 0 (0 returned in Fall 2019)

Degrees Awarded: 0

Engineering, Math, Physical Science Program Review Data AY 2020

Number Faculty:

3 full time (Southworth, Crompton, Saleh)

4 adjuncts (Deweese, Babb, Stover, Hayes)

Enrollment & Student credit hours by Faculty type:

Full time: 15 total credit hours taught, with 12 total students enrolled

Adjunct: 30 credit hours taught: 68 total students enrolled

Average Class size:

5.9 students in Face-to-Face classes

13.5 students in online classes

7.3 students across all courses

Completion rates:

94.3% face-to-face

77.8% online

88.8% all courses

Pass ('D' or better) rates:

98% face-to-face

85.7% online

94.4% all courses

Pass ('C' or better) rates:

96% face-to-face

85.7% online

93.0% all courses

Number of Majors: 3 (1 returned in Fall 2020)

Degrees Awarded: 0

Narrative:

The Engineering, Math, and Physical Science program saw a slight increase in overall enrollment year-over year, with most of this increase attributed to enrollment in online courses. A noticeable increase in course completion and student performance occurred in this period. While these metrics were improved in face-to-face courses, there was a decrease in completion and student performance in online courses in academic year 2019-2020 compared with the previous year.

3.0 Assessment of Student Learning Outcomes

3.2 Significant Assessment Finding

The program faculty should provide a narrative overview of the program's significant student learning outcomes assessment findings, any associated impact on curriculum, as well as any ongoing assessment plans. The program may attach data charts, assessment reports or other relevant materials. *(See Section 3.2 in the Program Review Handbook for more information.)*

Narrative:

Engineering:

No Engineering classes were run during this academic year.

Mathematics:

Three Mathematics majors' courses were run during the 2019-2020 academic year. These courses were Analytical Geometry and Calculus I, Plane Trigonometry, and Elementary Statistics.

Analytical Geometry and Calculus I had four total sections run in this academic year. Twenty students total were enrolled among all sections. Of these, nineteen students completed the course. All students who completed the course passed with a "C" average or better. Of the four sections run, student learning outcomes were assessed in two sections of this course. In these sections, a majority of students met all measures of each learning outcome

Plane Trigonometry had three total sections run in this academic year. 25 total students were enrolled between these two sections. All students who were enrolled in this course completed the course. One student failed, and the remaining 24 students passed with a "C" average or better. Assessment of student learning outcomes was unavailable for this course for this academic year.

Elementary Statistics had two total sections run in this academic year. 27 students total were enrolled between these sections. Of these, 21 students completed the course. Three students who completed the course failed. The remaining eighteen students who completed the course passed with a "C" average or better. Assessment of student learning outcomes was unavailable for this course for this academic year.

Physical Science:

Two Physical Science courses were run during the 2019-2020 academic year. These courses were Chemistry I for Majors and College Physics I.

Chemistry I for Majors had one section run in this academic year. Six students were enrolled in this section. Of these, four students completed the course. One of the students who completed the course received a “D” grade in the course. The remaining three students passed with a “C” average or better. Assessment of student learning outcomes indicates most outcomes (eleven of fifteen) were not met in this section.

College Physics I had one section run in this academic year. Two students were enrolled in this section. Of these, both students completed the course and passed with a “C” average or better. Assessment of student learning outcomes was unavailable for this course for this academic year.

4.0 External Constituency and Significant Trends

An important component of maintaining a superior program lies in awareness and understanding of other possible factors that may impact the program and/or student outcomes. After consideration of these other factors, program faculty should document the relevant information within this section. As applicable, this should include the following.

4.1: Program Advisory Committee:

Narrative: N/A

- Include Advisory Member Name/ Title/ Organization/ Length of Service on committee; note the Committee Chair with an asterisk (*).
- Upload meeting minutes from the previous spring and fall semesters and attach in the appendices section (10.0).

4.2: Specialized Accreditation:

- Include Accrediting Agency title, abbreviation, ICC contact; Agency contact, Date of Last Visit, Reaffirmation, Next Visit, FY Projected Accreditation Budget.
- Upload the most recent self-study and site visit documents.
- Upload agency correspondence which confirm accreditation status.

Narrative: N/A

4.3: Other:

Discuss any external constituencies that may apply to the program. *(See Section 4.3 in the Program Review Handbook for more information.)*

Narrative: N/A

5.0 Curriculum Reflection

5.1 Reflection on Current Curriculum

The program faculty should provide a narrative reflection that describes the program's curriculum holistically. The following are prompts formulated to guide thinking/reflection on curriculum. While presented in question form, the intent of the prompts is to stimulate thought and it is not expected that programs specifically answer each and every question.

- Is the curriculum of the program appropriate to the breadth, depth, and level of the discipline?
- How does this program transfer to four-year universities? (give specific examples)
- What types of jobs can students get after being in your program? (Please use state and national data)
- How dynamic is the curriculum? When was the last reform or overhaul?
- In the wake of globalization, how “internationalized” is the curriculum?
- How does the program assess diversity?
- Does the program have any community-based learning components in the curriculum?

Narrative:

This program was created three years ago to better accommodate our potential student population and design a single track to guide all pre-engineering, math, and physical science majors through their common classes and set them up to continue on to their four-year institution. All courses in this program transfer to four-year institutions in Kansas via the KBOR transfer matrix and are run with standards so that they should be transferrable anywhere in the US. This program gives students the opportunity to work toward several four-year degrees which allow entry into a variety of rewarding, in-demand careers within the service area as well as in other regions of the country.

5.2 Degree and Certificate Offerings or Support

Program faculty should list what degrees and certificates are offered and/or describe how the program curriculum supports other degrees and/or certificates awarded by the college.

Narrative:

This program awards an associate of science degree. Professors in this program support the Biology program, and the general education program by additionally teaching non-major classes in their respective areas.

8.0 Fiscal Resource Requests/Adjustments

8.1 Budget Requests/Adjustments

Based on program data review, planning and development for student success, program faculty will complete and attach the budget worksheets to identify proposed resource needs and adjustments. These worksheets will be available through request from the college's Chief Financial Officer. Program faculty should explicitly state their needs/desires along with the financial amount required.

Programs should include some or all of the following, as applicable, in their annual budget proposals:

- Budget Projections (personnel and operation)
- Position Change Requests
- Educational Technology Support
- Instructional Technology Requests
- Facilities/Remodeling Requests
- Capital Equipment

- Non-Capital Furniture & Equipment
- New Capital Furniture & Equipment
- Replacement Capital Furniture & Equipment

- Other, as applicable

- Accreditation Fee Request

- Membership Fee Request
- Coordinating Reports

Resource requests should follow budgeting guidelines as approved by the Board of Trustees for each fiscal year. The resource requests should be used to provide summary and detailed information to the division Dean and other decision-makers and to inform financial decisions made throughout the year.

Quantitative Data:

Below are the Budgets for Mathematics, Chemistry, and Physical Science for the 2019-2020 Academic Year, provided by Jason Castro:

INDEPENDENCE COMMUNITY COLLEGE
Math
For the Twelve Months Ending Tuesday, June 30, 2020

	<u>Operating Budget</u>	<u>Expense</u>	<u>Encumbered</u>	<u>Remaining</u>
Fund 11				
<u>Expenses</u>				
11-510:550 Salary	\$12,200.00	\$157,648.81		(\$145,448.81)
11-591:596 Fringe Benefits	49,491.00	20,450.92		29,040.08
11-700:700 Instructional Supplies	150.00			150.00
11-701 Office Supplies	150.00			150.00
Total	61,991.00	178,099.73		(116,108.73)

INDEPENDENCE COMMUNITY COLLEGE
Chemistry
For the Twelve Months Ending Tuesday, June 30, 2020

	<u>Operating Budget</u>	<u>Expense</u>	<u>Encumbered</u>	<u>Remaining</u>
Fund 11				
<u>Expenses</u>				
11-510:550 Salary	\$62,300.00	\$56,950.03		\$5,349.97
11-591:596 Fringe Benefits	12,953.00	13,089.02		(136.02)
11-601:601 Travel	1,000.00			1,000.00
11-648:649 Repairs	1,500.00	1,343.44		156.56
11-700:700 Instructional Supplies	4,200.00	5,947.84		(1,747.84)
11-717:718 ProfessionalDevelopment	500.00			500.00
Total	82,453.00	77,330.33		5,122.67

INDEPENDENCE COMMUNITY COLLEGE
Physical Science
For the Twelve Months Ending Tuesday, June 30, 2020

		Operating Budget	Expense	Encumbered	Remaining
Fund 11					
<u>Expenses</u>					
11-510:550	Salary	\$63,620.00	\$70,800.01		(\$7,180.01)
11-591:596	Fringe Benefits	9,067.00	9,391.59		(324.59)
11-601:601	Travel	1,500.00			1,500.00
11-648:649	Repairs	1,436.00			1,436.00
11-700:700	Instructional Supplies		566.00		(566.00)
11-717:718	Professional Development	500.00			500.00
11-850	Equipment	528.00			528.00
Total		76,651.00	80,757.60		(4,106.60)

Narrative:

At the present time, physics, chemistry and math are funded at reasonable levels for the classes being offered. It is requested that this program remain funded at the current level.

9.0 Program Planning and Development Participation

9.1 Faculty and Staff

Program faculty will provide a brief narrative of how faculty and staff participated in the program review, planning and development process. List the preparer(s) by name(s).

Narrative:

This program review was prepared by Nathan Chaplin with the assistance of Brian Southworth and Mona Saleh. Data was provided for this report by Jason Castro (Budgets), and Anita Chappuie (Institutional Research).

9.2 VPAA and/or Administrative Designee Response

After review and reflection of the *Comprehensive Program Review* or the *Annual Program Review*, the Division Chair and VPAA will write a summary of their response to the evidence provided. The Division Chair and VPAA's response will be available to programs for review and discussion prior to beginning the next annual planning and development cycle.

Narrative:

After reviewing the report for Engineering, Math & Physical Sciences prepared by Dr. Chaplin I agree with the findings. The program should be maintained at its present state with appropriate curricular changes as necessary in the future. Mark Allen, VPAA, 2/6/2021

I agree with findings and conclusions of this report. Brian Southworth 2.4.2020 (Program Review Committee Member and Division Chair of Math & Science)

PRC: Agree with the conclusions of the report and agree that the status should be to maintain current levels of support and funding.

10.0 Appendices

Any additional information that the programs would like to provide may be included in this section.