

Community College *of* Philadelphia

General Education  
Assessment Report:  
Technological Competency  
Fall 2018

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## Goals

Technological Competency is defined by six goals, effective Fall 2010. The Technological Competency sub-committee of the General Education Competency Committee defined the outcomes in alignment with CIS-103: Applied Computer Technology. The Computer Technologies Department has been collecting data on CIS-103 Course Level Outcomes since 2013. Five of the Course Level Outcomes are identical to the General Education Technological Competency Goals. One is different.

### General Education Technological Competency Goals:

- **Goal 1** - Graduates will be able to use word processing software to produce academic and professional documents, individually and working in collaboration with others.
- **Goal 2** - Graduates will be able to use electronic spreadsheets to organize, analyze and present data.
- **Goal 3** - Graduates will be able to use library information systems.
- **Goal 4** - Graduates will be able to use collaboration and social networking software for academic, professional, and personal use. They will be able to create Web pages from application software documents, and share those documents with others by posting them on the Web.
- **Goal 5** - Graduates will be able to connect personal computers to related equipment, such as printers, cell phones, PDAs (Personal Digital Assistants) and digital cameras, and to a wireless computer network in a secure manner.
- **Goal 6** - Graduates will demonstrate an understanding of common ethical issues related to the use of information technology systems and the handling of data, including privacy and security issues.

Five of the CIS-103 Course Level Outcome are identical to the General Education goals and so the assessment data from the course goals can be applied directly to the assessment of Technological Competency. Goal 3 of Technological Competency:

**Goal 3** - Graduates will be able to use library information systems.

Is expressed in the CIS-103 Course-Level Outcomes as:

**Goal III** – Students will demonstrate an understanding of fundamental database concepts, and be able to use library information systems.

When asked about the alignment between General Education Technological Competency Goal 3 and CIS-103 Goal III, CIS-103 faculty explained that they use library systems as the examples through which they teach students fundamental database concepts. This should be clarified and explained in advance of collecting General Education assessment data so that the General Education Review committee can determine whether the CIS-103 Database Concepts Goal III assessment adequately assesses the General Education Technological Competency Goal 3.

There are two alternative pathways to meeting the Technological Competency requirement; ADC 101-102 or CSCI 101-102.

## Benchmark

70% of students will achieve a minimum of 70% on the designated assessment instrument.

## Method

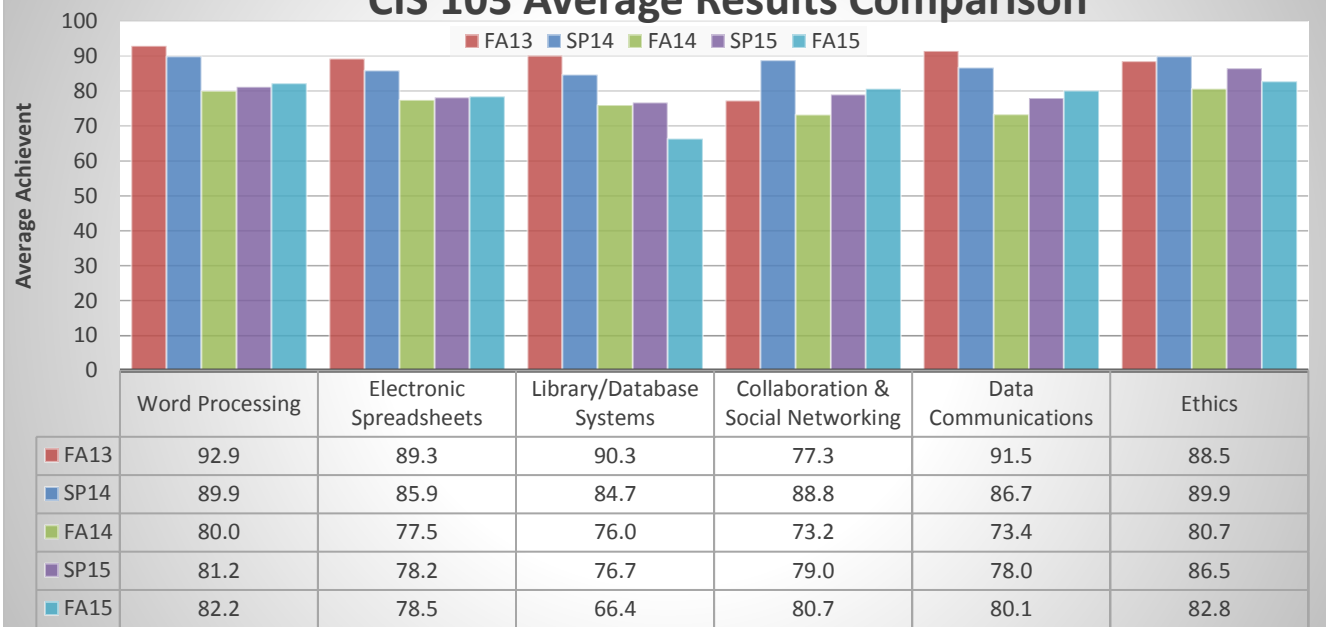
In Spring 2018 Technological Competency assessment data was requested post-hoc from the Computer Technologies Department. The Department provided CIS-103 Course Level assessment data from Fall 2013 to Spring 2017.

### Fall 2013-Fall 2015

Faculty created a comprehensive Analysis of Results using a form adapted from the Accreditation Council for Business Schools and Programs.

Semester/Year	FA13	SP14	FA14	SP15	FA15
Number of sections	18	27	39	25	39

## CIS 103 Average Results Comparison



The Analysis of Results forms recorded the Course Level Outcome performance measure, description of assessment instrument, analysis, action taken or improvement implemented, and the result of the action. The analyses also graphed trends in the Outcome since Fall 2013 and integrated relevant Teaching Circle and Department Meeting notes into the document. Achievement on Library/Database Systems was below benchmark in Fall 2015.

### Spring 2016

Assessment data was collected from faculty using a Google Doc and recorded according to how the outcome was addressed and how it was assessed. It was also noted that the new benchmark would be 75%, though later assessment data will repeat a benchmark of 70%.

N=31

(% of those who completed the course who achieved each outcome)



Outcome	How did you address this outcome?	How did you assess this outcome?	Success rate
<b>Goal I: Word Processing</b>	Lecture, demonstration, projects, quizzes, supplemental tutoring as needed	Word Departmental All-Inclusive Exam SP15 created by the CIS103 Teaching Circle.	94%
<b>Goal II: Electronic Spreadsheets</b>	Lecture, demonstration, projects, quizzes, supplemental tutoring as needed	Excel Departmental All-Inclusive Exam SP15 created by the CIS103 Teaching Circle.	87%
<b>Goal III: Database Systems</b>	Lecture, demonstration, discussions, projects, quizzes, supplemental tutoring as needed	Access Chapter 2 Quiz – Querying a Database created by the CIS103 Teaching Circle.	71%
<b>Goal IV: Collaboration and Social Networking</b>	Lecture, demonstration, discussions with examples, projects	Computer Concepts Departmental All-Inclusive Exam SP15 created by the CIS103 Teaching Circle.	81%
<b>Goal V: Data Communications</b>	Lecture on Digital Literacy chapters in text. Discussion of variety of hardware and software options available for users.	Computer Concepts Departmental All-Inclusive Exam SP15 created by the CIS103 Teaching Circle.	81%

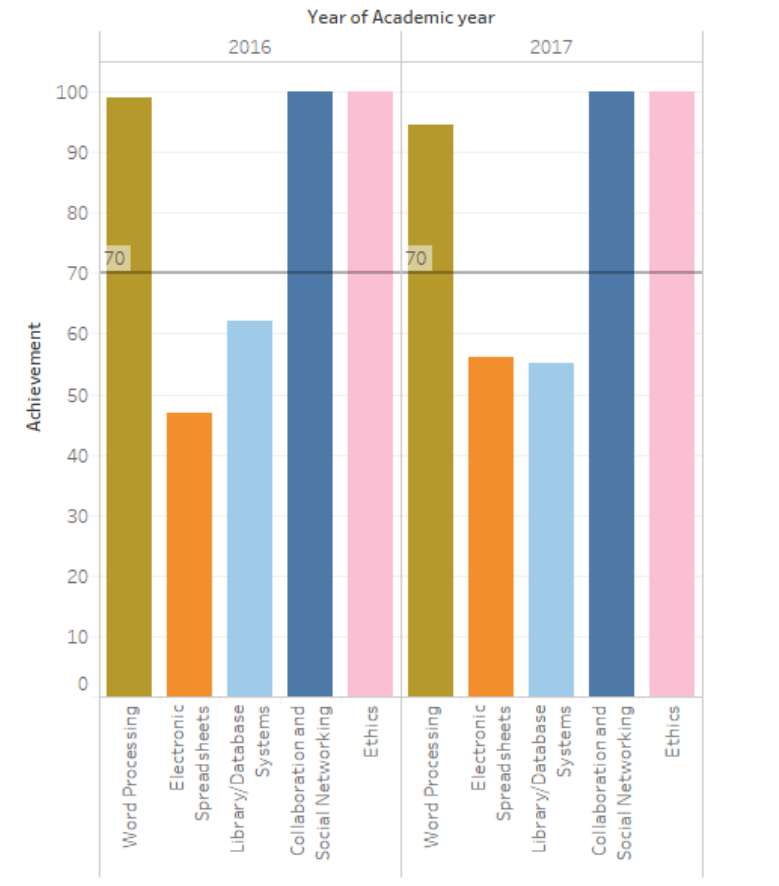
## Goal VI: Ethics

Defined Ethics and discussed topics from text. Ethical/unethical scenarios.	Computer Concepts Departmental All-Inclusive Exam SP15 created by the CIS103 Teaching Circle and Ethical/Unethical Scenarios.	94%
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### Fall 2016-Spring 2017

Assessment data was reported with no commentary or teaching and learning information. In this academic year students did not achieve the benchmark of 70% in Electronic Spreadsheets or Library/Database Systems. In 2017 the Data Communications Course Level Outcome was not assessed.

CIS-103 Course Level Outcomes Fall 2016- Spring 2017



### Indirect Evidence

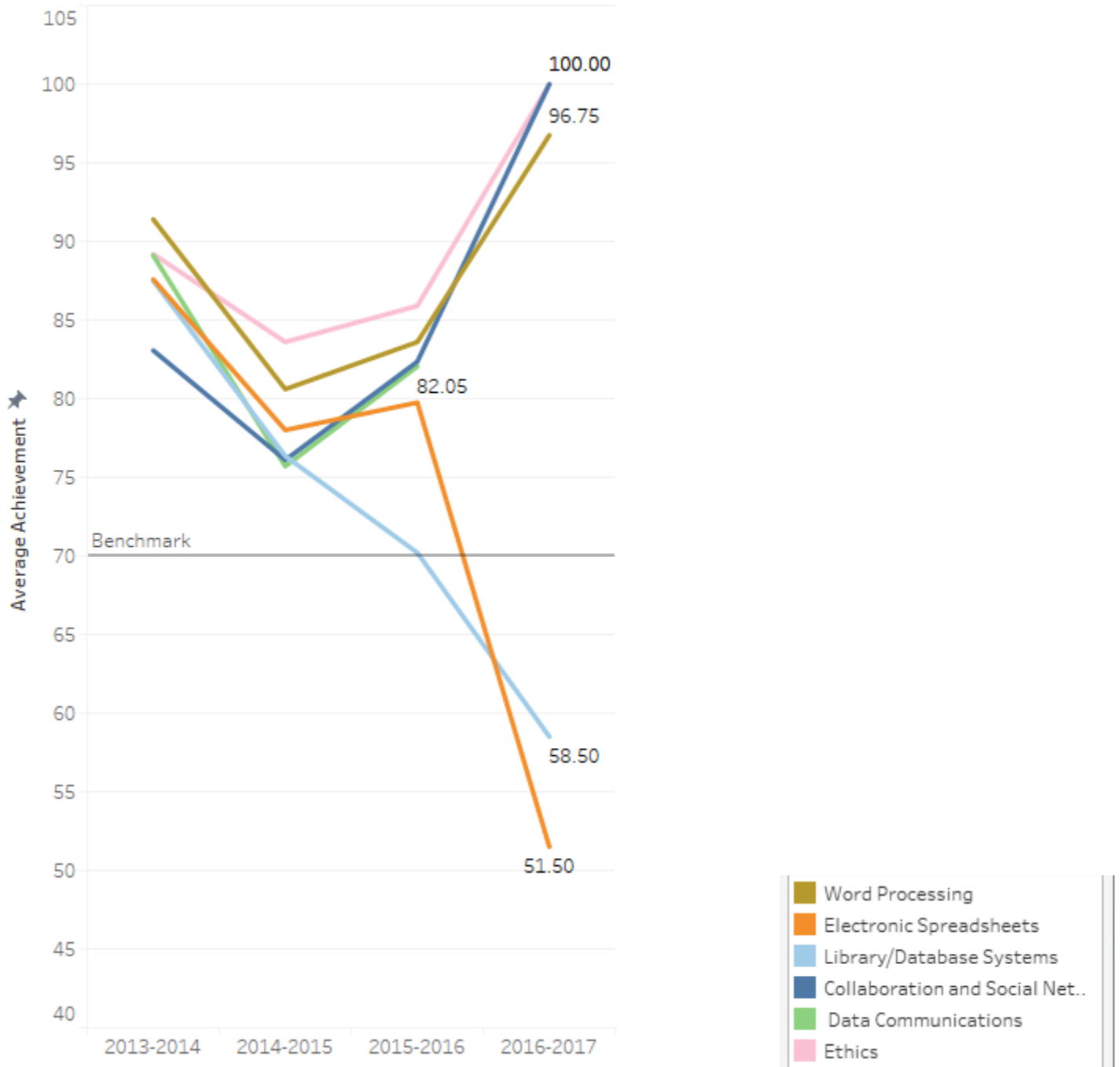
In Spring 2016 the Community College Survey of Student Engagement (CCSSE) asked students to rate CCP's contribution to their knowledge, skills, and personal development in a variety of categories. According to survey responses, 64.5% of part-time students and 74.6% of full-time students believe the College had contributed "quite a bit" or "very much" to their knowledge and skills in "using computing and information technology." CCSSE also reports on comparison groups. In the comparison group, 58.6% of part-time and 63.8% of full-time of students reported the same.<sup>1</sup> CCP students, more than students in a comparison group, believe the College is contributing to their development of technology skills.

<sup>1</sup> 2016 Frequency Distributions - Main Survey. Community College Survey of Student Engagement - Community College of Philadelphia (2016 Administration).

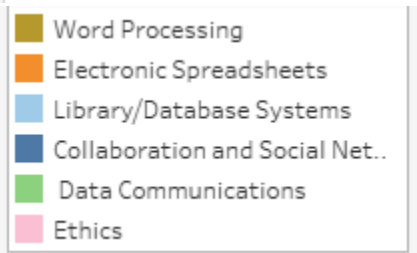
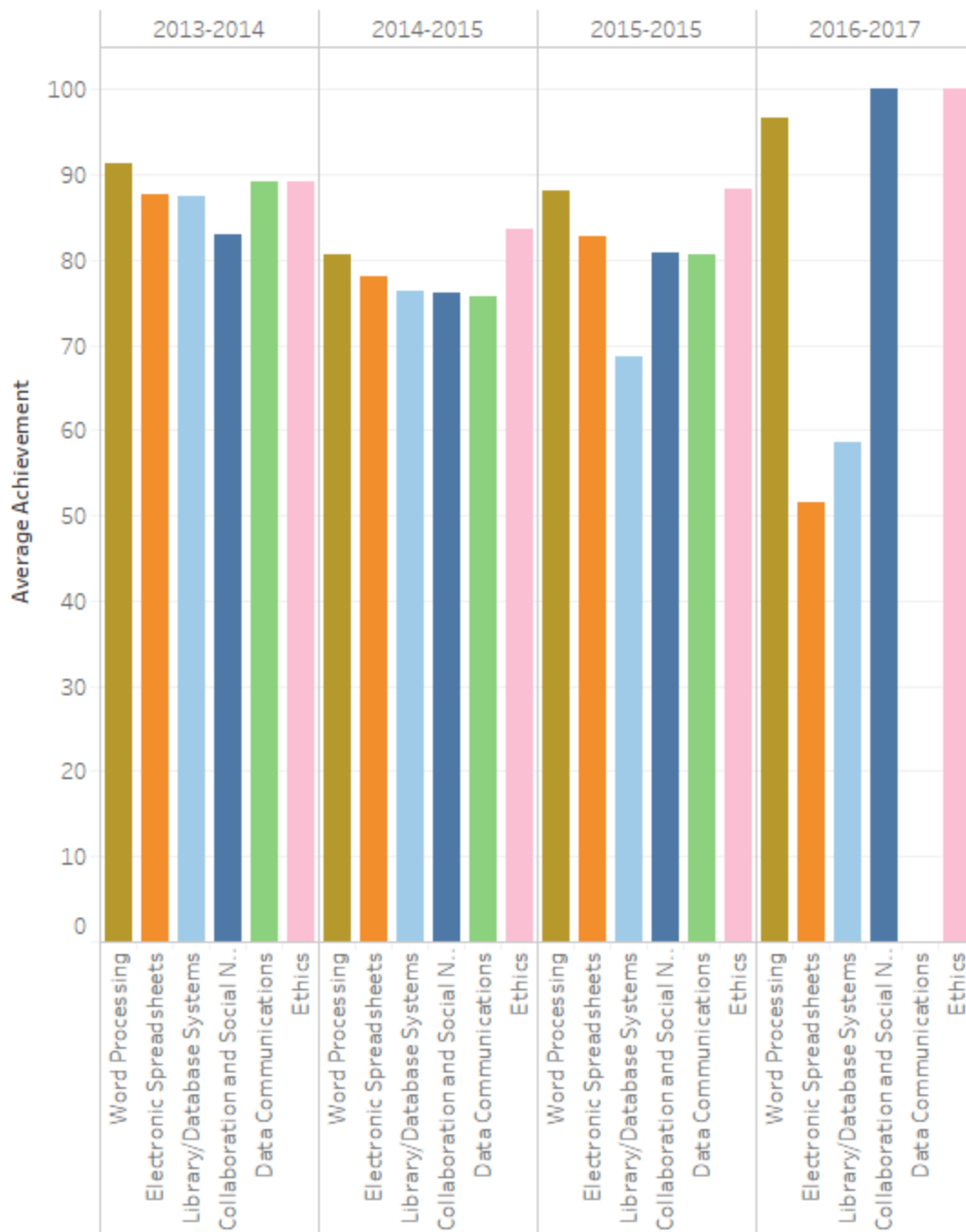
## Analysis

The Outcomes Results show achievement increased in three of five outcomes and decreased in two: Electronic Spreadsheets and Library/Database Systems.

### 2013-2017 Academic Year Trends



## 2013-2017 Academic Year Trends



Because the Course Outcome and General Education Outcomes regarding database systems differ, it is difficult to know whether student achievement in this area of General Education competency decreased or was even assessed.

1. Decreases in outcomes for Electronic Spreadsheets and Library/Database systems accelerated after a new curriculum was adopted in 2016.
2. The Teaching and Learning improvements from 2013-2016 indicate that faculty expected the curriculum adopted in 2016 to improve outcomes.
3. Achievement in Word Processing, Collaboration and Social Media, and Ethics all increased after the curriculum adoption.
4. 2016 also marks the point at which the assessment data was no longer reported using the Analysis of Results form. It is possible that the analysis being performed and reported in Teaching and Learning Circles contributed to greater student achievement in Electronic Spreadsheets and Library/Database Systems.

## Recommendations

1. Computer Technologies should clarify the alignment between the General Education Competency Goal 3: “Understand Library Systems” and CIS-103 Goal III, “ Students will demonstrate an understanding of fundamental database concepts, and be able to use library information systems” so that the General Education Review Committee can determine whether the CIS-103 Database Concepts assessment adequately assesses the General Education Technological Competency Goal 3.
2. CIS-103 faculty should review and discuss the assessment results for Electronic Spreadsheets and Library/Database Systems. They should create and implement teaching and learning improvements to help students better comprehend these concepts.
3. The Office of Assessment and Evaluation should create a plan to gather assessment data on the two alternate paths to meeting the Technological Competency requirement (ADC 101-102 or CSCI 111-112) and present it to the General Education Review Committee.