

*PUUG+. The NSSE was given Spring semesters 2006, 2009, 2011, 2014. The NSSE assesses students' abilities to work as a team, communicate, and critically think. These values will be compared to data from the senior questionnaire and results from IDEA evaluation reports.

The NSSE report changed how data are categorized from 2011 to 2014. As a result, the results provided for 2014 combines Biology in with Biochemistry or biophysics, Biomedical science, Botany, Cell and mvhe NSSE asome

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Attached Files

[Appendix 1](#)

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All students completing a degree in Biology at Tennessee Technological University will use scientific rebn

YEAR	TEAMWORK	COMMUNICATION	CRITICAL-THINKING
2013-2014	11.5%	29.5%	44.3%
2014-2015	10.7%	16.7%	32.1%
2015-2016	16.7%	21.4%	40.5%
2016-2017	22.2%	18.9%	66.7%
2017-2018	14.0%	16.7%	32.0%

CCTST results for Tennessee Tech Biology majors averaged 16.7 for 2017-2018. The Tennessee Tech average for this timeframe was 16.2 and the national average was 16.2. Based on these results, our students are learning critical thinking techniques as well as other students at Tennessee Tech and better than those at other universities administering the CCTST.

Table 5

Goal 3 - The Department of Biology will increase undergraduate retention.

Table 7

The Department of Biology has monitored enrollment and retention for several years and used these trends to develop strategies to meet this goal (Table 7). Although enrollment was not viewed as a concern by the department in 2017, in order to maintain a perspective on retention, enrollment data are included. In Fall 2014 and 2015, enrollment reached a high of 345 and declined to 285 in the fall of 2017. Health Sciences Biology is still the most popular concentration in the department, representing approximately 27% of all Biology majors. However, the decline represents 14 percentage points in one year. We are unsure of the root of the decline.

Table 7. Number of students enrolled as Biology majors and freshman fall-to-spring retention rates (percent) for undergraduates within the Department of Biology and Tennessee Tech University.

Year	Enrollment – Biology	Retention – Biology	Retention – TTU
2013	338	91.8	91.5
2014	345	87.8	90.6
2015	345	82.1	91.9
2016	316	86.3	92.4
2017	285	84.7	90.3

Table 6

Goal 4 - The Department of Biology will make significant progress toward increasing diversity.

Table 8

Table 8

On-going evaluation of the B.S. Biology degree program over the last five years (Table 8). Most of these students are enrolled in the Health Sciences concentration, and the establishment of this program in 2001 probably is the major factor influencing this increase. Over the last five years, over 50% of all undergraduate Biology majors have been females. Currently, 179 of 285 Biology majors are female. Attractiveness of certain programs to females (e.g., health-related biology and microbiology), as compared to others (e.g., applied field biology), probably provides the best explanation for this difference in gender balance among programs.

Table 8. Percentage of female students in the B.S. Biology degree program from 2013 to 2017.

2016	14.9	59.2
2017	14.4	62.8

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The department continues to administer the student questionnaire to graduating Biology majors to assess Program Goal 1 and evaluates the percentage data for participation in internship and co-op assignments on an annual basis. Due to low participation by Biology majors, departmental faculty post opportunities for Biology majors on the internship board, announce opportunities in classes, and forward e-mail announcements pertaining to internships and co-ops to students.

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Improve Undergraduate Student Experience

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Program Goal 2: The Department of Biology will increase the incorporation of t

Improve Undergraduate Student Experience

