

Results from the 2021 Survey of Incoming Freshmen

Summary Report

Survey Background

A web-based survey was administered in the summer of 2021 to all incoming first-time, first-year students at Virginia Tech. This survey was designed in consultation with a group of faculty members with experience working with undergraduate students and administered by the Office of Analytics and Institutional Effectiveness. The purpose of the survey was to gather information regarding incoming students' previous learning experiences and perceptions of their future collegiate learning and engagement. This survey assesses four core elements: students' high school experiences, their purpose in coming to Virginia Tech, how they hope to be challenged and grow, and their anticipated university involvement.

The survey was designed to provide information for faculty and staff about Virginia Tech's incoming students. This survey contains institutionally-focused questions rather than the generic items contained on national instruments such as the Cooperative Institutional Research Program Survey and the National Survey of Student Engagement.

Limitations

Since student participation in the survey was voluntary, the results may not be generalizable to the entire population of incoming freshmen. Many responses indicate only what incoming students *intend to do* while they are at Virginia Tech.

Participant Demographics

- Of 7,020 incoming students invited to participate in the survey, 3,136 responded, resulting in a response rate of 44.7%.
- Of those students who completed the survey's demographic questions:
 - 47.8% were female (See Table 1 in Appendix A).
 - 63.4% identified as White (non-Hispanic), 12.9% as Asian/Pacific Islander, 7.4% as Hispanic, and 6.6% as African American (See Table 2 in Appendix A).
- 56.5% of students indicated that they will be transferring at least four credit hours into Virginia Tech. Of those students, 16.9% indicated that they would be transferring more than 16 credit hours (See Table 3 in Appendix A).
- The top ten intended majors for freshmen entering Virginia Tech in August 2021 are:
 1. Computer Science – 8.6% (262 responses)
 2. Mechanical Engineering – 6.6% (202 responses)
 3. Biological Sciences – 6.2% (188 responses)
 4. Aerospace Engineering – 4.9% (148 responses)
 5. Business Information Technology – 3.3% (101 responses)
 6. Animal and Poultry Sciences – 2.9% (89 responses)
 7. Finance – 2.8% (85 responses)
 8. Architecture – 2.8% (84 responses)
 9. Computer Engineering – 2.7% (81 responses)

10. Human Nutrition, Foods, and Exercise – 2.6% (78 responses)

Results: High School Experiences

- 76.4% of students graduated with a GPA greater than 3.75. Of those students, 46.6% indicated that they graduated with a 4.0 or better (See Table 4 in Appendix B).
- When students were asked about instructional methods used in their high school classes:
 - The most commonly reported method was “teacher lecture.”
 - 86.7% indicated that teacher lecture was used more than 50% of the time in their high school classes, with 63.0% indicating that teacher lecture was used more than 75% of the time (See Table 5 in Appendix B).
 - The second most commonly used instructional method was “projects using technology.”
 - 67.0% of students reported that this instructional method was used in their high school classes more than 50% of the time, with 46.7% indicating that projects using technology were used more than 75% of the time (See Table 5 in Appendix B).
- When students were asked to report their **level of confidence to successfully complete a challenging task in a high school class** (See Table 6 in Appendix B):
 - 66.6% reported that they felt “confident” or “extremely confident”;
 - 30.8% reported that they felt “somewhat confident”;
 - 1.8% of students reported that they were “not at all confident”; and
 - 0.8% of students reported that they never had a challenging task in high school.

Results: Reasons for Attending Virginia Tech

- 51.0% of students reported that their **primary reason for pursuing an undergraduate degree** at Virginia Tech was to help them get a job. An additional 34.0% of students indicated that **their primary motivation was to develop a strong foundation for success in graduate, law, or medical school** (See Table 7 in Appendix C).
- 59.0% of students reported that they anticipated their **principal activity upon graduation** to be employment, while 33.5% planned to attend graduate or professional school. The next most frequent response was military service with 5.3% (See Table 8 in Appendix C).
- Of the students responding, 81.3% indicated that they anticipate graduating with their undergraduate degrees in four years. 6.8% of the respondents (210 students) anticipate taking longer to complete their degree (See Table 9 in Appendix C).
- When incoming freshman were asked **what excited them the most about coming to Virginia Tech**, many students talked about meeting new people, the new environment and opportunities, academic life, and independence and freedom.
- When incoming freshman were asked **what concerned them most about entering Virginia Tech**, many students talked about workload, time management, transitioning from high school to college, being away from home and finding a sense of belonging.

Results: Personal Growth and Openness to Change

- When students were asked **which skills and abilities, they need to improve upon** the most to be successful, the five most frequent responses were oral communication skills (12.7%); computer/technology skills (9.9%); critical thinking/analysis skills (9.0%); written communication skills (9.0%); knowledge of global issues (8.8%) (See Table 10 in Appendix D).
- In contrast, the five least frequent responses were ethical reasoning (2.7%); quantitative reasoning (5.2%); information literacy/library skills (5.6%); scientific reasoning (5.9%); and the ability to communicate with people different from themselves (7.1%) (See Table 10 in Appendix D).
- As a group, students who participated in the survey believe they will be challenged more intellectually than socially (See Table 11 in Appendix D).
 - A total of 89.4% of respondents indicated that they **expect to be challenged intellectually** “often” or “all of the time” while at Virginia Tech (See Table 11 in Appendix D).
 - In contrast, 50.1% of respondents indicated that they **expect to be challenged socially** “often” or “all of the time” (See Table 12 in Appendix D).
- When asked “**Do you think you will be the same person or a different person by the time you complete your degree?**” 63.5% of students reported that they expect to change while at Virginia Tech (See Table 13 in Appendix D).

Results: Anticipated University Involvement

- When asked about expectations for their future participation at Virginia Tech, students indicated that they were most likely to participate in (1) an internship, field experience, co-op, or practicum; (2) community service/volunteer work as part of a course; and (3) organizations or clubs designed for people in my primary major; (4) Organization focused on special interest/hobby (See Table 14 in Appendix E).
- In contrast, students indicated that they would be least likely to participate in (1) Student government; (2) Intercollegiate sports; and (3) Organizations related to cultural or ethnic heritage; (4) Arts organization (music, theater, dance) (See Table 14 in Appendix E).

Additional Information

For more information on the 2021 Survey of Incoming Freshmen, please contact Bethany Bodo, Director, Institutional Effectiveness, Office of Analytics and Institutional Effectiveness, at bbodo@vt.edu.

Appendix A – Participant Demographics

Table 1. What is your gender?

| <u>Gender</u> | <u>Count</u> | <u>Percent</u> |
|-----------------------|---------------------|-----------------------|
| Female | 1493 | 47.8% |
| Male | 1566 | 50.2% |
| Other | 24 | 0.8% |
| Prefer not to respond | 39 | 1.2% |
| Total | 3122 | 100% |

Table 2. What is your racial or ethnic background?

| <u>Race/Ethnicity</u> | <u>Count</u> | <u>Percent</u> |
|------------------------------|---------------------|-----------------------|
| African American | 205 | 6.6% |
| Asian/Pacific Islander | 402 | 12.9% |
| Hispanic/Latino | 230 | 7.4% |
| Native American | 7 | 0.2% |
| White (non-Hispanic) | 1973 | 63.4% |
| Multi-racial | 179 | 5.8% |
| None of the above categories | 33 | 1.1% |
| Prefer not to answer | 84 | 2.7% |
| Total | 3113 | 100% |

Table 3. How many credits will you be transferring into Virginia Tech?

| <u>Response</u> | <u>Count</u> | <u>Percent</u> |
|------------------------|---------------------|-----------------------|
| 0 | 652 | 21.6% |
| 1-3 | 662 | 21.9% |
| 4-6 | 516 | 17.1% |
| 7-10 | 320 | 10.6% |
| 11-13 | 195 | 6.5% |
| 14-16 | 164 | 5.4% |
| More than 16 | 511 | 16.9% |
| Total | 3020 | 100% |

Appendix B – High School Experiences

Table 4. Which of the following best describes your high school G.P.A.?

| Grade Point Average | Count | Percent |
|----------------------------|--------------|----------------|
| 2.5-2.75 | 3 | 0.1% |
| 2.76-3.00 | 13 | 0.4% |
| 3.01-3.25 | 76 | 2.4% |
| 3.26-3.50 | 213 | 6.8% |
| 3.51-3.75 | 431 | 13.8% |
| 3.76-4.00 | 930 | 29.8% |
| Greater than 4.00 | 1452 | 46.6% |
| Total | 3118 | 100% |

Table 5. What percent of the time were the following instructional methods used in your high school classes?

| Method | Percentage of Time Used | | | | | | |
|---------------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| | Less than 10% | 10 – 25% | 26 – 50% | 51 – 75% | 76 – 90% | More than 90% | More than 50%* |
| Discussion and debate | 16.5% | 31.0% | 23.0% | 16.2% | 9.8% | 3.4% | 29.5% |
| Student presentations | 12.7% | 29.6% | 22.6% | 19.6% | 10.6% | 4.9% | 35.1% |
| Teacher lecture | 0.7% | 2.4% | 10.2% | 23.7% | 35.4% | 27.6% | 86.7% |
| Role plays | 69.6% | 19.8% | 6.4% | 2.4% | 1.2% | 0.6% | 4.2% |
| Art and drama activities | 58.4% | 24.9% | 9.0% | 4.1% | 2.3% | 1.4% | 7.8% |
| Projects using technology | 3.3% | 11.7% | 18.0% | 20.4% | 24.6% | 22.1% | 67.0% |
| Group projects | 2.7% | 16.4% | 25.2% | 27.5% | 19.9% | 8.4% | 55.7% |
| Research projects | 6.6% | 21.2% | 23.8% | 23.0% | 17.8% | 7.7% | 48.5% |
| Case studies | 39.1% | 27.4% | 16.4% | 9.5% | 5.3% | 2.3% | 17.1% |

*This column shows the total percentage of students reporting that a particular instructional method was used in their high school classes either 51-75%, 76-90%, or more than 90% of the time.

Table 6. When you were working at a challenging task in a high school class, how confident were you that you would succeed?

| Response | Count | Percent |
|---|--------------|----------------|
| I never had a challenging task in high school | 25 | 0.8% |
| Not at all confident | 55 | 1.8% |
| Somewhat Confident | 962 | 30.8% |
| Confident | 1694 | 54.2% |
| Extremely Confident | 387 | 12.4% |
| Total | 3123 | 100% |

Appendix C – Reasons for Attending Virginia Tech

Table 7. What do you see as your primary reason for pursuing an undergraduate degree at Virginia Tech?

| Primary Reason | Count | Percent |
|--|--------------|----------------|
| To help me get a job | 1596 | 51.0% |
| To help me develop a strong foundation for success in graduate school | 1062 | 34.0% |
| To broaden my knowledge base and strengthen skills such as writing and critical thinking | 385 | 12.3% |
| To take classes to transfer to another institution | 16 | 0.5% |
| My parents made me attend | 7 | 0.2% |
| At this point, I am not really sure | 62 | 2.0% |
| Total | 3128 | 100% |

Table 8. Which of the following is most likely to be your principal activity upon graduation?

| Principal Activity | Count | Percent |
|--|--------------|----------------|
| Employment | 1840 | 59.0% |
| Graduate or professional school | 1043 | 33.5% |
| Military service | 166 | 5.3% |
| Volunteer activity (e.g., Peace Corps) | 23 | 0.7% |
| Starting or raising a family | 12 | 0.4% |
| Other | 34 | 1.1% |
| Total | 3118 | 100% |

Table 9. When do you think you will graduate with your undergraduate degree?

| Response | Count | Percent |
|-------------------|--------------|----------------|
| In 3 years | 142 | 4.6% |
| In 3.5 years | 231 | 7.4% |
| In 4 years | 2530 | 81.3% |
| In 4.5 years | 78 | 2.5% |
| In 5 years | 130 | 4.2% |
| More than 5 years | 2 | 0.1% |
| Total | 3113 | 100% |

Appendix D – Personal Growth and Openness to Change

Table 10. Which of the following skills and abilities do you feel you need to improve upon the most to be successful? (Students could select up to three)

| <u>Skill/Ability</u> | <u>Count</u> | <u>Percent</u> |
|--|--------------|----------------|
| Oral communication | 1359 | 12.7% |
| Computer/technology | 1060 | 9.9% |
| Critical thinking/analysis | 971 | 9.0% |
| Written communication | 968 | 9.0% |
| Knowledge of global issues | 947 | 8.8% |
| Interpersonal (social) | 906 | 8.4% |
| Organizational ability | 845 | 7.9% |
| Leadership | 834 | 7.8% |
| Ability to communicate with people different from myself | 761 | 7.1% |
| Scientific reasoning | 633 | 5.9% |
| Information literacy/library skills | 603 | 5.6% |
| Quantitative reasoning | 554 | 5.2% |
| Ethical reasoning | 292 | 2.7% |
| Total | 10733 | 100% |

Table 11. During your time at Virginia Tech, how often do you think you will be challenged intellectually?

| <u>Response</u> | <u>Count</u> | <u>Percent</u> |
|-----------------|--------------|----------------|
| Not at all | 3 | 0.1% |
| Rarely | 16 | 0.5% |
| Occasionally | 312 | 10.0% |
| Often | 2187 | 69.9% |
| All the time | 611 | 19.5% |
| Total | 3129 | 100% |

Table 12. How often do you think you will be challenged socially?

| <u>Response</u> | <u>Count</u> | <u>Percent</u> |
|-----------------|--------------|----------------|
| Not at all | 43 | 1.4% |
| Rarely | 267 | 8.5% |
| Occasionally | 1248 | 39.9% |
| Often | 1163 | 37.2% |
| All the time | 403 | 12.9% |

| | | |
|--------------|------|------|
| Total | 3124 | 100% |
|--------------|------|------|

Table 13. Do you think you will be the same person or a different person by the time you complete your degree?

| Response | Count | Percent |
|------------------------------|--------------|----------------|
| The same | 23 | 0.7% |
| Mostly the same | 274 | 8.8% |
| More the same than different | 843 | 27.0% |
| More different than the same | 1302 | 41.6% |
| Mostly different | 370 | 11.8% |
| Different | 315 | 10.1% |
| Total | 3127 | 100% |

Appendix E – Anticipated University Involvement

Table 14. In which of the following do you think you will participate while at VT?

| Type of Activity | Not Likely | Probably | Yes |
|---|-------------------|-----------------|------------|
| Internship, field experience, co-op, or practicum | 5.1% | 41.8% | 53.1% |
| Community service/volunteer work as part of a course | 9.4% | 53.3% | 37.3% |
| Community service/volunteer work outside of course requirements | 20.7% | 48.7% | 30.6% |
| University learning community (e.g., Galileo, Hypatia, Da Vinci, Residential Leadership) | 56.7% | 17.2% | 26.0% |
| Research project with a faculty member | 24.0% | 57.3% | 18.7% |
| Study abroad - break week or short-term | 37.7% | 40.9% | 21.4% |
| Study abroad - at least a semester | 48.5% | 32.7% | 18.8% |
| Attend a professional or scholarly meeting or conference | 14.5% | 57.8% | 27.6% |
| Give a talk or exhibit work at a professional, scholarly, cultural, or artistic conference or meeting | 46.7% | 43.6% | 9.6% |
| Intramural sports | 34.3% | 38.9% | 26.8% |
| Intercollegiate sports | 70.3% | 21.7% | 8.0% |
| Organizations or clubs designed for people in my primary major | 6.8% | 57.8% | 35.5% |
| Social fraternity or sorority | 62.9% | 26.1% | 11.0% |
| Student government | 80.3% | 16.9% | 2.8% |
| Arts organization (music, theatre, dance) | 70.7% | 20.2% | 9.2% |
| Organization focused on special interest/hobby | 6.8% | 59.2% | 34.1% |
| Organization related to cultural or ethnic heritage | 68.0% | 22.8% | 9.2% |