

# 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](mailto: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%
<b>Total</b>	<b>3122</b>	<b>100%</b>

**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%
<b>Total</b>	<b>3113</b>	<b>100%</b>

**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%
<b>Total</b>	<b>3020</b>	<b>100%</b>

**Appendix B – High School Experiences**

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

<b>Grade Point Average</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	<b>3118</b>	<b>100%</b>

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

<b>Method</b>	<b>Percentage of Time Used</b>						
	<b>Less than 10%</b>	<b>10 – 25%</b>	<b>26 – 50%</b>	<b>51 – 75%</b>	<b>76 – 90%</b>	<b>More than 90%</b>	<b>More than 50%*</b>
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?**

<b>Response</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	<b>3123</b>	<b>100%</b>

**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?**

<b>Primary Reason</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	<b>3128</b>	<b>100%</b>

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

<b>Principal Activity</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	<b>3118</b>	<b>100%</b>

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

<b>Response</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	<b>3113</b>	<b>100%</b>

**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%
<b>Total</b>	<b>10733</b>	<b>100%</b>

**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%
<b>Total</b>	<b>3129</b>	<b>100%</b>

**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%

<b>Total</b>	3124	100%
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**Table 13. Do you think you will be the same person or a different person by the time you complete your degree?**

<b>Response</b>	<b>Count</b>	<b>Percent</b>
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%
<b>Total</b>	3127	100%

**Appendix E – Anticipated University Involvement**

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

<b>Type of Activity</b>	<b>Not Likely</b>	<b>Probably</b>	<b>Yes</b>
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%