

**Resolution 2021-22F**  
**Resolution to Modify the Pathways to General Education**  
**Concept 5 – Quantitative and Computational Thinking Requirements**

Recommended by the Commission on Undergraduate Studies and Policies

First Reading: January 24, 2022

Faculty Senate:

Staff Senate:

Graduate and Professional Student Senate:

Undergraduate Student Senate:

Second Reading:

Approved by University Council:

Approved by the President:

Effective: 2022-2023 Undergraduate Course Catalog and Academic Policies

**WHEREAS**, creating the categories of “Foundational” and “Advanced/Applied” for Pathways to General Education Concept 5 – Quantitative and Computational Thinking allows for increased rigor in general education requirements and there is value in students having at least one unit of Advanced/Applied Concept 5; and

**WHEREAS**, currently students must fulfill Pathways to General Education Concept 5 – Quantitative and Computational Thinking requirements by completing two Foundational and one Advanced/Applied courses; and

**WHEREAS**, many degree programs require extensive coursework in the area of Quantitative and Computational Thinking, allowing students to fulfill Pathways to General Education Concept 5 with one Foundational and two Advanced/Applied courses that would facilitate progress toward degree for many students and create opportunities for expanding coursework accepted for this Pathways to General Education Concept; and

**WHEREAS**, modifying the Pathways to General Education Concept 5 – Quantitative and Computational Thinking requirement to add the option for one Foundational and two Advanced/Applied courses would increase the rigor of some students’ Pathways to General Education courses; and

**WHEREAS**, the university is expecting to increase transfer enrollment in the next 4 years, this modification would create increased flexibility for transfer students and students entering Virginia Tech with dual enrollment credits; and

**WHEREAS**, the proposed modification would increase opportunities for flexibility and rigor within degree programs;

**THEREFORE, BE IT RESOLVED**, that completing:

Two courses for Concept 5 – Quantitative and Computational Thinking, Foundational, and  
One course for Concept 5 – Quantitative and Computational Thinking, Advanced/Applied  
(Current requirement)

is equivalent to completing

Two courses for Concept 5 – Quantitative and Computational Thinking, Advanced/Applied, and  
One course for Concept 5 – Quantitative and Computational Thinking, Foundational  
(Modified requirement); and

**THEREFORE, BE IT FURTHER RESOLVED**, that the following language will be added to the 2022-2023 Undergraduate Course Catalog and Academic Policies, Pathways to General Education, Core Concept 5 – Quantitative and Computational Thinking requirements:

“Credit Hours: 9 credits – 6 Foundational + 3 Advanced/Applied, or 3 Foundational + 6  
Advanced/Applied”

And that the Office of the University Registrar in coordination with the Office of General Education will develop a plan to communicate this modification to Pathways to General Education, Core Concept 5 – Quantitative and Computational Thinking, requirement to the university community.