PATHWAYS
TO GENERAL EDUCATION

Advising Guide

A Guide for Students, Advisors & Faculty

VIRGINIA TECH

Pathways: General Education at Virginia Tech

Advising Guide

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pathways.prov.vt.edu

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Undergraduate Advising at Virginia Tech

Definition

Advising at Virginia Tech is a collaborative process between student and advisor leading to the exchange of information that encourages the individual student to make responsible academic and career decisions.

Philosophy

Virginia Tech demonstrates a commitment to advising through recognizing and supporting the needs of students and advisors. Each undergraduate student at the University is provided information and assistance, which aids the individual student in making responsible academic and career decisions. Each advisor is provided the necessary tools to respond to student needs and the opportunity to be recognized and rewarded for exemplary advising. Virginia Tech, in support of this philosophy, will provide student-focused advising and assist students in developing skills that lead them to take active responsibility for the advising process.

Statement of University Responsibility

Senior leaders will provide leadership by:

- Reviewing the advising process to assess the impact of the recommendations implemented;
- Providing information for students, advisors, parents, and other constituents that clearly explains responsibilities and expectations related to advising;
- Making information available about advising for all new faculty and appropriate staff;
- Collecting and disseminating information that contributes to effective advising;
- Assisting students in clarification of academic and long term goals;
- Supporting initiatives to enhance the use of technology in advising;
- Providing support for a web-based interactive advising support system for students, advisors, parents, and other constituents;
- Supporting a Virginia Tech plan that would effectively assess, recognize, and reward advising in the annual professional evaluation.

Statement of Student Responsibility

The student shares responsibility for developing and advising partnership with the advisor. Over time, the partnership results in increased responsibility for the student. Students are responsible for:

- Communicating goals, needs, wants, and concerns to the advisor in a respectful and sincere manner;
- Keep abreast of their own academic progress and requirements related to their academic programs;
- Making, keeping, and being prepared for appointments with the advisor;
- Informing the advisor of changes in plans and/or circumstances that might impact academic performance;
- Knowing departmental procedures regarding changing advisors;
- Bringing any concerns regarding the quality of advising to the attention of the advisor.

Statement of Advisor Responsibility

The advisor shares responsibility for developing an advising partnership with each student. Advisors are responsible for:

- Communicating with students and delivering individualized and accurate information in a professional and sincere manner;
- Being informed and providing accurate information about current academic policies and procedures;
- Keeping appointments and being available for assistance;
- Providing appropriate referrals, contacts, and information;
- Doing appropriate follow-up with students;
- Seeking out and taking advantage of opportunities for professional development.

For further information about advising at Virginia Tech visit www.advising.vt.edu or contact your advisor.

Pathways: General Education at Virginia Tech

As a central component of the undergraduate experience at Virginia Tech, the Pathways curriculum will guide students to examine the world from multiple perspectives and integrate their knowledge across disciplines and domains of learning through a hands-on, minds-on, approach.

The purpose of Pathways to General Education is to *prepare individuals to engage with diversity, complexity, and change; to provide students with a broad knowledge of the world.*

Virginia Tech's new approach is Pathways to General Education which offers a coherent program comprised of courses reflecting best practices in pedagogy, as well as a vibrant, flexible, and meaningful general education.

What Students Will Gain | Pathways Principles

The Pathways curriculum will provide a breadth of learning drawn from various disciplines and will be developed in accordance with the following principles: Integration, Inclusivity, and Relevance.

Integration

Students will have opportunities to integrate Ethical Reasoning and Intercultural Global Awareness in a variety of contexts. Students completing interdisciplinary minors will integrate ways of knowing between courses and in a culminating capstone experience. Students completing the alternative pathways will have opportunities to integrate skills and knowledge through learning experiences both in and outside of the traditional classroom.

Inclusivity

The Pathways Curriculum offers flexibility to support the diverse paths students take to Virginia Tech. By encountering inclusive pedagogies in the classroom, students from a variety of backgrounds can better develop the skills and knowledge to contribute to the democratic and global society in which they live and work. Students will be encouraged to examine issues of diversity and inclusion such as gender, race, SES, and sexual orientation through integration of outcomes in Intercultural and Global Awareness.

Relevance

Students can clearly connect well-aligned course goals, activities, and learning artifacts by completing lessons built on best practices in learning design. Students can explore fundamental areas of knowledge to build a strong foundation for participation in further curricular and co-curricular experiences. Students will develop skills they need for success in every area of their lives: communication, problem solving, critical thinking, ethical behaviors, inquiry and creativity.
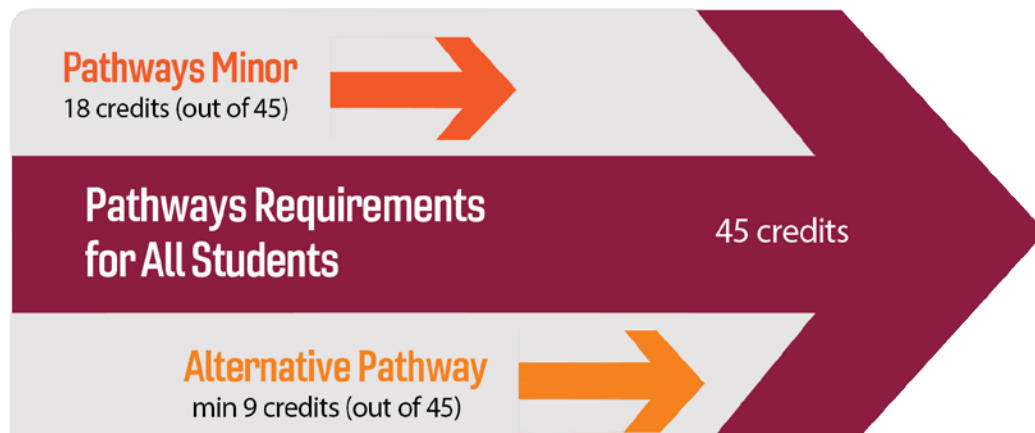
Pathways Structure

The Pathways Curriculum includes a total of 45 credits over 7 core concepts and two integrative concepts. Students choose courses from the different concept categories to fulfill the credit hour requirements. Many AP, IB, dual enrollment, and transfer courses may count for credit.

Some students might pursue a Pathways Minor or an Alternative Pathway as means of completing a portion of the requirements.

Pathways Minor
18 credits (out of 45)

Pathways Requirements for All Students

45 credits

Alternative Pathway
min 9 credits (out of 45)

Pathways Minor

Students engaging in the pathways minor will experience the breadth of learning in general education as well as a depth and integration through a cross-disciplinary minor.
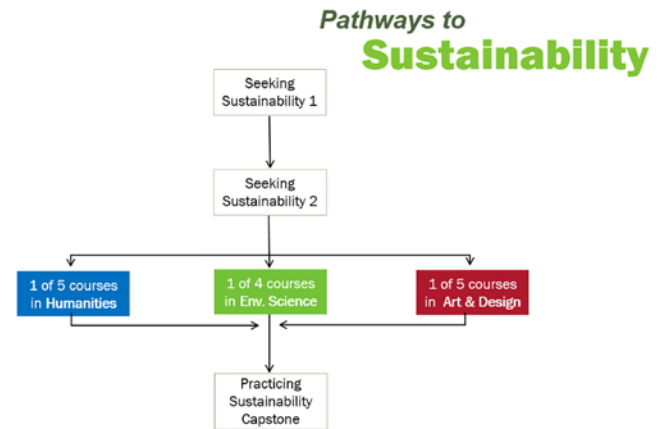
Requirements

- Cross disciplinary program with at least three core concepts and both integrative concepts
- At least 18 credits with a minimum of 6 at the 3000-4000 level. Note: not all courses in the minor need to be approved as Pathways courses.
- It includes a capstone experience
- Students completing a minor will earn 9 pathways credits or more.
- All students undertaking Pathways Minors must still complete the remainder of the Pathways credit hours and concepts not covered by the minor.

Example:

Pathways to **Sustainability**

Alternative Pathway

The Alternative Pathways are high impact learning experiences offered in order to meet Pathways concepts with more flexibility. This Pathway could include: Study Abroad, Co-Curricular experiences, Undergraduate Research, Presidential Global Scholars and others.

Requirements

- Meet three core concepts and both integrative concepts
- Faculty advisor supervision
- Prior approval by UCCGE
- All students undertaking Alternative Pathways must still complete the remainder of the Pathways credit hours and concepts not covered by the Alternative Pathway.
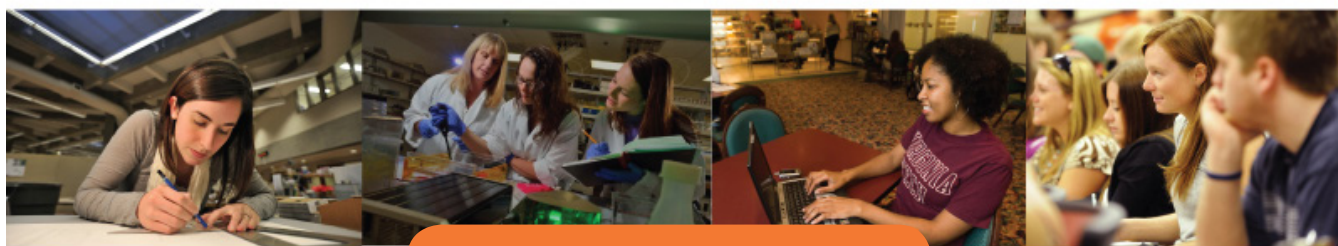
Examples:

Presidential Global Scholars

Study abroad to Ecuador

Pathways Concepts

The Pathways curriculum includes seven core concepts and two integrative concepts. The concepts reflect broad knowledge areas for study and are supported by student learning outcomes. These outcomes describe the observable behaviors that students will demonstrate as they pursue breadth and/or depth related to particular concepts.

Core Concepts

The core concepts reflect the most traditional distribution model of general education and could be met either at Virginia Tech or with credits earned via transfer, Advanced Placement, or International Baccalaureate credit. The integrative concepts are those that could be met along with a core learning outcome in a particular course.

Discourse
9 credits

Quantitative and Computational Thinking
9 credits

Reasoning in the Natural Sciences
6 credits

Critique and Practice in Design and the Arts
6 credits

Reasoning in the Social Sciences
6 credits

Critical Thinking in the Humanities
6 credits

Critical Analysis of Identity and Equity in the United States
3 credits (double-counting)

Discourse

Exchange of ideas in writing or speaking, adapted to specific contexts and developed through discovery, analysis, creation, presentation, and evaluation. A student who is competent in discourse demonstrates the ability to reason, write, and speak effectively for academic, professional, and public purposes. Students will demonstrate increasing proficiency over the years. All student learning outcomes would be met in all courses, but expectations for proficiency would be heightened for advanced/applied courses.

Credit hours: 9 credits—6 foundational + 3 advanced/applied writing and/ or speaking courses

Student Learning Outcomes

1. Discover and comprehend information from a variety of written, oral, and visual sources.
2. Analyze and evaluate the content and intent of information from diverse sources.
3. Develop effective content that is appropriate to a specific context, audience, and/or purpose.
4. Exchange ideas effectively with an audience.
5. Assess the product/presentation, including feedback from readers or listeners.

Quantitative and Computational Thinking

Creative engagement with the world by the manipulation of precisely defined symbolic representations. Quantitative thinking is the formulation of questions that can be addressed using mathematical principles, leading to answers that include reliable and usable measures of accuracy. Computational thinking is the ability to conceive meaningful, information-based representations of the world that can be effectively manipulated using a computer. Courses or course sequences addressing this concept must meet a majority of the student learning outcomes. Only the combination and integration of quantitative and computational courses will serve to meet this core concept.

Credit hours: 9 credits—6 Foundational + 3 advanced/applied

Student Learning Outcomes

1. Explain the application of computational or quantitative thinking across multiple knowledge domains
2. Apply the foundational principles of computational or quantitative thinking to frame a question and devise a solution in a particular field of study.
3. Identify the impacts of computing and information technology on humanity.
4. Construct a model based on computational methods to analyze complex or large-scale phenomenon.
5. Draw valid quantitative inferences about situations characterized by inherent uncertainty.
6. Evaluate conclusions drawn from or decisions based on quantitative data.

Reasoning in the Natural Sciences

Involves the acquisition of the detailed knowledge of one or more of the natural sciences, hands-on experience with how science is conducted, what science can and cannot tell us about the universe, and the relationship between science and society. Courses or course sequences addressing this concept must meet a majority of the student learning outcomes.

Credit hours: 6 credits (with an additional 2 lab credits for students in some majors)

Student Learning Outcomes

1. Explain the foundational knowledge of a particular scientific discipline.

2. Apply principles and techniques of scientific inquiry.

3. Evaluate the credibility and the use/misuse of scientific information.

4. Analyze the reciprocal impact of science and society.

Critical Thinking in the Humanities

This core concept involves the interpretation and analysis of texts and other created artifacts to understand ideas, values, and identities in various spatial, cultural, and temporal contexts. Courses or course sequences addressing this concept must meet a majority of the student learning outcomes.

Credit hours: 6 credits

Student Learning Outcomes

1. Identity fundamental concepts of the humanities.

2. Analyze texts and other created artifacts using theories and methods of the humanities.

3. Interpret texts and other created artifacts with multiple historical, intellectual, and cultural contexts.

4. Synthesize multiple complex sources and create a coherent narrative or argument.

Reasoning in the Social Sciences

Refers to the utilization of quantitative and qualitative methods to explain the behavior and actions of individuals, groups, and institutions within larger social, economic, political, and geographic contexts. Courses meeting this concept will help students to understand that they are a small part of a larger global community and to engage with diverse individuals, groups, and ideas that have shaped or continue to shape the worlds they inhabit. Courses or course sequences addressing this concept must meet a majority of the student learning outcomes.

Credit hours: 6 credits

Student Learning Outcomes

1. Identify fundamental concepts of the social sciences.
2. Analyze human behavior, social institutions and/or patterns of culture using theories and methods of the social sciences.
3. Identify interconnections among and differences between social institutions, groups, and individuals.
4. Analyze the ways in which values and beliefs relate to human behavior and social relationships.

Critique in Design and the Arts

This learning outcome involves a hands-on, minds-on approach by which students acquire the intellectual tools for a richer understanding and knowledge of the process, meaning and value of the fine, applied and performing arts and creative design. It recognizes that the creative design process can and should be applied to a broad range of disciplines. Courses or course sequences addressing this concept must meet a majority of the student learning outcomes. To meet this core concept, students will study the arts and design thinking in two courses: either 1 design and 1 arts course, or 2 integrated courses.

Credit hours: 6 credits--3 design + 3 arts, or 6 integrated design and arts

Student Learning Outcomes

1. Identify and apply formal elements of design or the arts.
2. Explain the historical context of design or the arts.
3. Apply interpretive strategies or methodologies in design or the arts.
4. Employ skills, tools, and methods of working in design or the arts.
5. Produce a fully developed work through iterative processes of design or the arts.

Core Concept

Critical Analysis of Identity and Equity in the United States

Explores the ways social identities related to race, ethnicity, gender, gender identity, gender expression, class, disability status, sexual orientation, religion, veteran status, economic status, age, and other socially salient categories and statuses, influence the human condition and experience, with focus on the United States in particular or in comparative perspective.

It recognizes that people in society have had different experiences and opportunities related to social categories, and challenges students to consider their ethical responsibilities to others in that context and in the context of Ut Prosim, to enhance their capacities to be engaged citizens and visionary leaders in an increasingly diverse society. Students will gain self-awareness of how they are situated relative to those around them based on social identities and foundational knowledge of the interactive dynamics of social identities, power and inequity.

Credit hours: 3 credits (may be double-counted with another core concept).
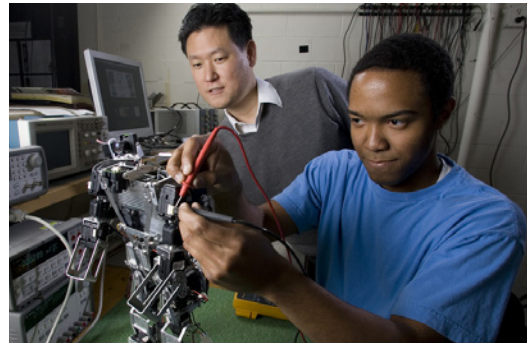
Student Learning Outcomes

1. Analyze how social identities, statuses, space, place, traditions, and histories of inequity and power shape human experience in the United States (particularly or in comparative perspective).

2. Analyze social equity and diversity in the United States (particularly or in comparative perspective) through multiple perspectives on power and identity.

3. Demonstrate how creative works analyze and/or reimagine diversity in human experiences in the United States (particularly or in comparative perspective).

4. Demonstrate how aesthetic and cultural expressions mediate identities, statuses, space, place, formal traditions, and/or historical contexts in the United States (particularly or in comparative perspective).

5. Analyze the interactive relationships between place, space, identity formation, and sense of community in the United States (particularly or in comparative perspective).

Integrative Concepts

The need for students to have knowledge and skills in these areas is crucial to all aspects of their lives. Students will develop the capacity to recognize these concepts as they apply to any discipline, thus helping them to consider and connect various perspectives. Every Pathways course address **at least one** of the Integrative Concepts. This infusion of the Integrative Concepts into general education signals the importance of these concepts to students at Virginia Tech.

Ethical Reasoning
Credits hours embedded

Intercultural and Global Awareness
Credits hours embedded

Ethical Reasoning

It is the principled evaluation of moral and political beliefs and practices. In today's complex and diverse world, ethical behavior requires more than just the desire to do the right thing. Foundational learning of ethical theories, issues, and applications provides tools that enable students to deliberate and to assess for themselves claims about ethical issues in their personal, public, and professional lives. Courses addressing this concept must meet a majority of the student learning outcomes.

Credit hours: This integrative concept will be met in conjunction with core concepts. No extra hours will be necessary.

Student Learning Outcomes

1. Explain and contrast relevant ethical theories.
2. Identify ethical issues in a complex context.
3. Articulate and defend positions on ethical issues in a way that is both reasoned and informed by the complexities of those situations.

Intercultural and Global Awareness

It supports effective and appropriate interaction with a variety of people and different cultural contexts. Considerations of diversity and inclusion are crucial for students in an increasingly complex world. An important application of this learning is the critical analysis of global systems and legacies and their implications for people's lives and the earth's sustainability. Courses addressing this concept must meet a majority of the student learning outcomes.

Credit hours: This integrative concept will be met in conjunction with core concepts. No extra hours will be necessary.

Student Learning Outcomes

1. Identify advantages and challenges of diversity and inclusion in communities and organizations.
2. Interpret an intercultural experience from both one's own and another's worldview.
3. Address significant global challenges and opportunities in the natural and human world.

Rationale for Credit Hours Required

The plan for Pathways is projected at 45 hours, which is necessary for students to accomplish breadth and depth they need for their current lives as students and their future lives as professionals, citizens, and family members. With the new focus on learning outcomes, however, students will be able to meet some of the outcomes in their major.

In the Pathways curriculum, some course work may meet more than one concept. Although double-counting of courses will be possible, the goal of general education will still be to provide a breadth of experience for students across disciplines. A review of current major check sheets indicates that the new requirement for hours will not delay time to degree.

Essentially, the core and integrative concepts and associated hours assure that every Virginia Tech student has the opportunity to meet the related student learning outcomes. Some may already be meeting a concept in a course required in the major, but others may not have that opportunity.

Planning a Program of Study in Pathways

Frequent Asked Questions

1. What is the purpose of the Pathways to General Education?

See the statement of purpose / Pathways Principles on page 4.

2. What unifies courses in Pathways?

The subjects of Pathways courses vary by discipline, but they are unified by adhering to the Pathways principles of Integration, Inclusivity, and Relevance.

3. Is there any way I can be exempt from meeting these requirements?

No, all students must complete the requirements of Pathways.

4. How many credits are required?

45.

5. Are the Pathways requirements the same in all majors and colleges at Virginia Tech?

Yes, all students must complete all Pathways requirements. However, the courses recommended (or required) to meet these requirements will vary by major.

6. How do I choose among Pathways courses?

Talk to your advisor to find which courses best extend on your past experiences, complement your major coursework, help meet your life goals, and satisfy your personal interest.

7. Where do I go to obtain more information about the Pathways to General Education requirements for my college or department?

Your academic advisor, the undergraduate office of your college, and the Undergraduate Catalog are the best sources of information. You should always consult your advisor when planning your program of study.

8. May I use Advanced Placement credits to meet Pathways requirements?

Yes, consult the AP, IB, and CLEP credit guide on the Registrar's website.

9. If I am a transfer student, must I complete the Pathways to General Education requirements?

It depends. If you are transferring with a completed associate's degree from a Virginia institution, then you can consider the requirements met. However, in any other circumstance, you will be required to complete any remaining requirements not met through transfer credit.

10. While enrolled at Virginia Tech, may I take Pathways to General Education courses at another college or university and transfer them here?

Yes, please consult the course transfer database at the Registrar's website. In addition, if you are a prospective student, consult with the Office of Admissions for more information. If you are a currently enrolled student, please consult your advisor.

11. Should I take only Pathways courses in the first year?

This varies greatly student-to-student. Please consult with your advisor to lay out the best plan for completing your requirements.

12. How long does it take to complete the Pathways requirements?

This varies greatly student-to-student. Please consult with your advisor to lay out the best plan for completing your requirements.

13. I've heard of something called "Satisfactory Progress." How does this relate to Pathways?

For further information, be sure to see "Student's Responsibility - Satisfactory Progress Toward Degree" in the Undergraduate Catalog. Departments also set criteria for satisfactory progress within their majors; students should check with the department or their advisor.

14. Do I need to plan the whole Pathways program at once?

No, but you should be thinking about which courses you would like to take from each Pathway Concept (see worksheet at pages 17 and 18). Look over the options for each concept to see which courses interest you most- keeping in mind the specific requirements of your major and the fact that not all Pathways courses are offered every term. You may also consider enrolling in a Pathways Minor or pursuing an Alternative Pathway as a means of completing a portion of your Pathways requirements. Your advisor can help you.

15. Who teaches the Pathways courses?

Members of all faculty ranks participate in the development and instruction of Pathways classes.

16. Can I take Honors Courses to satisfy CLE requirements?

Yes, please consult the timetable and your advisor to see which courses and experiences qualify for Pathways credit.

17. What if I don't get a Pathways course that I requested?

Consult with your advisor to find another time to take it or another course that will satisfy the requirement.

18. What if the second course in a sequence is not offered during the semester in which I want to take it?

Consult with your advisor to make a plan to complete the second course in the sequence.

19. May I take additional Pathway courses, even if I have completed the requirements?

Yes as long as you are also making adequate progress toward completing your degree.

20. Does the university have a foreign language requirement?

Yes, please consult the admissions website to learn more about the foreign language requirement.

21. Can some Pathways requirements be fulfilled through study-abroad programs?

Yes, carefully review the literature related to the study abroad experience to see if it already has Pathways credit attached. Otherwise, consult your advisor (and a faculty mentor) about ways to get a study abroad experience to count for Pathways credit.

22. Can Pathways courses count toward more than one area simultaneously?

No. The only exception is the Identity and Equity in the United States core concept. In this case, one course can count toward this and another core concept simultaneously.

23. Are there examples of different ways to fulfill Pathways requirements?

Yes. The Pathways website features examples of different scenarios demonstrating the different ways that students might earn Pathways credits.

24. Can I complete a Pathways minor while earning general education credits?

Yes, you can, but which kinds and how many credits you can earn will vary depending on your major.

25. Can I do any of the Pathways minors?

All of the minors are available to all students, but some will help you complete more of your general education requirements than others. This will also vary depending on requirements for your major.

26. If I choose to do a Pathways minor, when do I need to declare that?

It depends on the minor. Consult the minor checksheet or contact the department sponsoring the minor for further information.

27. I changed my major. Do I have to retake general education coursework for my new major?

It depends on the requirements of the major. Contact your advisor for further information.

28. Can I take courses for Pathways credit on a P/F (Pass/Fail) basis?

No course used for Pathways general education credit may be taken on a P/F basis unless only offered on a P/F basis.

Access Pathways Resources webpage

www.pathways.prov.vt.edu/resources.html

PATHWAYS
TO GENERAL EDUCATION

VIRGINIA TECH

Pathways Preferences Worksheet

Discourse

6 credit hours of approved Foundational Discourse

(3)_____
(3)_____

3 credit hours of Advanced/Applied Discourse

(3)_____

Additional College Requirements:

_____
_____

Critical Thinking in the Humanities

6 credit hours selected from approved Pathways courses

(3)_____
(3)_____

Additional College Requirements:

_____
_____

Reasoning in the Social Sciences

6 credit hours selected from approved Pathways courses

(3)_____
(3)_____

Additional College Requirements:

_____
_____

Reasoning in the Natural Sciences

6 or 8 credit hours selected from approved Pathways courses

(3)_____
(1)_____
(3)_____
(1)_____

Additional College Requirements:

_____
_____
_____

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Quantitative and Computational Thinking

6 credit hours of approved Foundational Quant/Comp courses

(3) _____

(3) _____

3 credit hours of approved Advanced/Applied Quant/Comp courses

(3) _____

Additional College Requirements:

_____

_____

_____

Critique and Practice in Design and the Arts

6 credit hours selected from approved Pathways courses

(3 design) _____

(3 arts) _____

Additional College Requirements:

_____

_____

_____

Critical Analysis of Identity and Equity in the United States

3 credit hours selected from approved Pathways courses

(3) _____

Additional College Requirements:

_____

_____

Foreign Languages:

Check the Undergraduate Course Catalog for university-wide requirements and for requirements specific to the College of Liberal Arts and Human Sciences and the College of Science and consult with your advisor.

Pathways

A new approach to General Education at Virginia Tech

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