

## Course Guidelines

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# I. Overview

## 1. Course Proposal Criteria

- New or revised standard course.
- New or revised course for inclusion in Pathways General Education.
- Course long and/or ADP title change.
- Course designator change.
- Course number change:
  - A change in course number for a previously approved course is considered a “new” course (e.g., changing from 3000-level to 2000-level).
- Change in grade mode.
- Change in course instructional contact to credit hours.
- Noting that not all faculty and staff reviewing course proposals will be familiar with the course content or discipline, write all proposal sections so that both primary readers (subject matter experts) and secondary readers (people outside the discipline) will be able to understand what is being taught in the course. In further support, avoid using discipline jargon and define acronyms.
- Revision of Catalog Description, Learning Objectives, and/or Topic Syllabus.
  - Course proposal should have continuity/alignment between the Catalog Description (content), Learning Objectives (outcomes), and Topic Syllabus (topics) sections of the course proposal in support for the following:
  - Notable alignment between the content in the Catalog Description to the learning outcomes/topics outlined in the Learning Objectives and Topic Syllabus
  - Learning Objectives that present measurable outcomes for assessing the student’s proficiency in these content/topic areas.
  - Use key/connecting words and concepts throughout the proposal to show alignment between the Catalog Description (content), Learning Objectives (outcomes), and Topic Syllabus (topics).
- Request to create Undergraduate/Graduate conjoined courses (4000-5000G):
  - The undergraduate proposal must be approved before the graduate proposal can be reviewed. If possible, bundle these proposals as you put them into the system.
- Request to separate currently approved Undergraduate/Graduate conjoined courses (4000-5000G).
  - New Graduate course proposal will need to be submitted to change the 5000G course to a standalone 5000 course.
  - Discontinue Graduate course proposal will need to be submitted to discontinue 5000G course.

## 2. Course Proposal University Academic Governance Review/Approval Process

- College/Department/School prepares and submits new or revised course proposal as outlined below in Section II. Standard Course Guidelines, Section III. Pathways Course Guidelines, or Section IV. Pre-/Co-requisite Guidelines, as applicable.
- Following proposal preparation, select “Start Workflow” tab to begin proposal review/approval process.
- Proposal is reviewed/approved to move forward by the College/Department/School.

- Proposal is reviewed/approved to move forward by College Associate Dean.
- Proposal is submitted for university review to allow for...
  - Assessment of any course content, subject matter, and/or discipline overlap concerns.
  - Office of the University Registrar Academic Governance staff to provide comments/recommendations in support for compliance with University standards, guidelines, and policies.
  - Pathways General Education staff, and University Curriculum Committee for General Education (UCCGE), as applicable, to provide comments/recommendations in support for compliance with Pathways General Education course requirements.
    - Please note that the UCCGE will approve some Pathways proposals during scheduled meetings and not immediately in Courseleaf.
  - "No response" from the University community during the university review period represents "no concerns" with proposal content.
- Once any university review comment(s) has(have) been addressed, the proposal is moved to the associated College Curriculum Committee for review/approval.
- Following the College Curriculum Committee review/approval, the proposal is forwarded...
  - To Faculty Senate for information.
  - To Pathways General Education staff, as applicable, for information.
  - To University Registrar Academic Governance staff for final review prior to "bridging" approved proposal content to Course Catalog/Banner.

Example workflows, as displayed in Courseleaf, can be found below.

Please note that while there are differences between the three main submission types, some of the same approval steps remain (Department Chair, Associate Dean, Office of the University Registrar, etc.)

A common cause for proposals being rolledback is fields not populating, so confirm that the entry includes the numerical code when selecting the Department and College.

Green text indicates the course has cleared that step of the workflow and orange denotes that it is still awaiting approval.

<u>Standard Workflow Example</u>	<u>Pathways Workflow Example</u>	<u>Pre-/Co-Requisite Workflow Example</u>
<p>In Workflow</p> <ol style="list-style-type: none"> <li>1. 0001 Department Chair GR</li> <li>2. 01 Associate Dean View GR</li> <li>3. Registrar 15 Day Review</li> <li>4. 01 College Curriculum Committee Chair GR</li> <li>5. Office of the University Registrar</li> <li>6. Banner</li> </ol>	<p>In Workflow</p> <ol style="list-style-type: none"> <li>1. 0151 Department Chair UG</li> <li>2. 02 Associate Dean View UG</li> <li>3. Registrar 15 Day Review</li> <li>4. Pathways General Education 15 Day Review</li> <li>5. UCCGE Chair</li> <li>6. 02 College Curriculum Committee Chair UG</li> <li>7. Office of the University Registrar</li> <li>8. Banner</li> </ol>	<p>In Workflow</p> <ol style="list-style-type: none"> <li>1. 0101 Department Chair UG</li> <li>2. 05 College Curriculum Committee Chair UG</li> <li>3. 05 College Associate Dean</li> <li>4. Office of the University Registrar</li> <li>5. Banner</li> </ol>

## II. Standard Course Guidelines:

**Note:** Boxes outlined in **Red** are required fields and must be completed prior to moving proposal forward to Courseleaf workflow.

### 1. Course Request Type Field

## Course Inventory

### New Course Proposal

Course Request Type

Select course type, as applicable:

- Standard
- Pathways
- Pre/Co Requisite

#### Notes:

- The following guideline content assumes “Standard” (i.e., non-Pathways) “Course Request Type” selected.
- When using this Guideline for course revision...
  - Fields will be populated with previously approved course content.
  - Edits to this content will be “redlined.”

### 2. Contact Information Fields

#### Contact Information:

Department

Contact Name

Contact Phone  Contact E-mail

Provide associated Dept/School contact information for person proposing new or revised course. This is the person who will be reached out to during 15-DR to address proposal comments. However, the department contact name is not associated with workflow if they were not the user to enter the proposal.

### 3. Scorecard Metric Fields

Is this a Scorecard  Yes  No

Course?

If No, continue to next step.

If Yes, select applicable Scorecard Metrics, and provide justification for each selected metric in “Justification” box provided.



- Scorecard Metrics  Study Abroad  Service Learning  
 Experiential  Undergraduate Research

Scorecard Course -  
Justification

**Notes:**

When writing the justification for the selected Scorecard Metric(s), consider the following Scorecard Metric “Definition” and “Interpretive Guidance,” as applicable:

**Study Abroad**

Definition:

Courses that carry this attribute should include meaningful participation of all enrolled students in learning activities outside of the United States. The activities should be germane to the learning objectives of the course and appropriate for the discipline. Faculty members directing these courses must be in compliance with university policies and procedures concerning international travel programs. The number of course credits should be proportional to the duration of the activity keeping in mind that a 1-credit on-campus laboratory course meets 30-45 hours per semester.

Interpretive Guidance:

This classification is for a Virginia Tech credit-bearing course. The attribute should be attached to a course only when all sections of the course are taught as part of an education abroad experience.

**Service Learning**

Definition:

Courses that carry this attribute should include a meaningful participation of all students enrolled in the course in at least 15 hours of community service that is germane to the learning objectives of the course. The learning sites are normally off campus in community settings and the students are expected to engage directly with clients wherever possible. The participating students do so as volunteers in the settings but may receive grades for the course. This course does not have to be registered with the Service Learning Center.

Interpretive Guidance:

Service learning is not simply volunteering in the community as an "add on" to a course. The service teaming must be an extension of the classroom experience. Service teaming pedagogy also involves some form of reflection to create the connection and integration of the service learning experiences with the course content.

**Experiential**

Definition:

“Courses that carry this attribute should include a meaningful participation of all enrolled students in work experiences akin to internships (time in a work-place setting), or projects that have real-world clients, or products and outcomes, and/or engage students in activities that simulate workplace responsibilities and performance. The learning sites are normally off campus in work place settings though some on-campus activities may qualify. The participating students may be compensated and the courses may be graded and required for graduation.”

Interpretive Guidance:

Focus on the phrase, "akin to internship." Courses focused on developing basic skills to prepare students for an internship experience should not carry the experiential learning attribute. A course focused on developing technical writing skill only becomes "experiential teaming" when the writing is for a "real-world client." Students may develop design skills in a

course. The course is experiential when they use the design skills to solve a problem for a "real world client." If the experience in class could legitimately appear on a resume as "work-related experience," the experiential learning attribute is appropriate.

**Undergraduate Research**

Definition

"Courses that carry this attribute include meaningful participation of all students enrolled in this course in intellectual or creative activity, characteristic of the discipline. With faculty supervision, the student defines the topic, designs and carries out the methodology, and presents the results in a manner consistent with the goals of the activity and the course."

Interpretive Guidance:

Students must carry out all elements of the research process resulting in an original intellectual or creative contribution appropriate to the discipline. Team projects are acceptable as long as each member of the team is participating in the overall research process. While many courses are designed to develop a student's research abilities, only those courses in which a student produces original research should carry the undergraduate research attribute.

4. First Year Experience Fields

First Year  Yes  No  
Experience Course?

If No, continue to next step.

If Yes, record whether FYE Director has approved proposed course for FYE.

FYE Director  Yes  No  
Approval

If No, request and attach FYE Director letter before moving proposal forward in Courseleaf workflow.

If Yes, attach FYE Director approval letter.

FYE Approval Letter

[Attach File](#)

Uploaded Files:

Files To Be Uploaded:

5. Topic Course Fields

Is this a Topics  Yes  No  
Course?

If No, continue to next step.

If Yes, consider the following criteria in support for this Topics Course...

Topics Course Text Criteria....

- If a course may be repeated with different content for credit, please add "Topics" to the course title. This will have the advantage of allowing different subject topics to be presented on the student transcript. If this direction is taken, begin the course title and ADP title with the word "Topics" in the "Long Title" and "Course Transcript (ADP) Title" fields boxes below (e.g., title: Topics in Global Public Policies, ADP: Topics Global Public Policies).

- Include repeatability statement in Catalog Description (e.g., May be repeated \_\_\_\_\_ times with different content for a maximum of credit hours.).
- Write Learning Objectives broad enough that they support the two to three sample Syllabus topics provided in the course proposal.
- Provide at least two example reading lists to illustrate the assigned “Texts and Special Teaching Aids” and/or learning materials for different topics.
- Provide at least two example Topic Syllabi to illustrate the content to be covered when the courses focus *on* different topics.

## 6. Academic Level Fields

- Academic Level
- AS - Associate
  - GR - Graduate
  - MD - Medicine
  - PR - Professional
  - UG - Undergraduate

Academic Level -  
Justification

### Notes:

Select applicable “Academic Level” and include paragraph in the provided “Academic Level – Justification” box to justify and/or explain why this course is requested to be taught at the selected academic level.

- Begin paragraph with statement, “Course is taught at the X000-level because...”
- Consider the following questions, as applicable, when writing the level justification:
  - What does the student need to bring to the course to succeed?
  - What does the student need to succeed while in the course?
  - What will the student take from the course and apply toward the successful completion of their area of study?
- As applicable, frame level justification for course based on the value and/or contribution the placement of the course at the X000-level offers a student toward the successful completion of the course and/or academic program, giving consideration to the following:
  - Skills/concepts acquired by students through courses completed during previous academic level(s) that support student success in the course. For example:
    - Program courses taken at 1000, 2000, and/or 3000-level for a 4000-level course...
      - “... use of laboratory equipment, familiarity with circuit design and analysis techniques learned during sophomore year...”
      - “... requires integration of knowledge learned in required courses normally taken during sophomore or junior years...”
    - Program courses taken at UG level for a 5000-level course...
      - “... builds upon undergraduate skills and knowledge in an applied, professional format while introducing advanced theoretical content...”
  - Skills/concepts acquired by students through the completion of the course prerequisite(s) that support student success in the course. For example:
    - Content taught in UG prerequisite for an UG course...
      - “...background in cell regulatory process, protein function, and other biological

principles taught in prerequisites enabling student to think in language of chemical structure and reactivity...”

- Content taught in 5000-level prerequisite for a 5000 graduate level course...
  - “...graduate students who have the knowledge of regression models, statistical inference, and linear models theory acquired through course prerequisites...”
  - “...builds upon structure and functions of neurons and glial cells, molecular signaling, and the cellular and molecular basis of nervous system diseases taught in course prerequisites...”
- Expectations based upon student ability to comprehend, assimilate, discuss, and/or apply course material appropriate for requested course academic level. For example:
  - Academic rigor of course (e.g., introductory, intermediate, or advanced content/material; course workload);
  - Tasks (e.g., concept memorization/application, communication skills, problem solving, data interpretation and/or analysis, team projects, research); and/or
  - Maturity (e.g., cognitive development, critical thinking skills, life/academic/work experiences, cumulative academic knowledge).
- Rationale presented by the department/school in support for timing of when a course is taken within particular curriculum structure or program of study. The level of difficulty of the subject matter is not the basis for this level justification, but rather the placement of the course in a particular curriculum structure or program of study as determined appropriate by the department/school. For Example:
  - A 6000-level course may be used as the school feels appropriate in support for a program requirement. A 6000-level course does not necessarily imply that it is progressively harder than a 5000-level course or that it has a 5000-level prerequisite; rather, the 6000-level course content would be taken later in the program requirements.
- The intent of the above is to provide a variety of topical areas that may be used in support of the course level justification. Course level justification should be a concise/succinct statement using only those topical areas that apply.
- Noting that enrollment and advancement through Virginia Tech Carilion School of Medicine curriculum is based upon a defined cohort of students moving through curriculum together, the level justification for each course may be similar.

## General Information

### 7. Effective Term Field

Effective Term	<input type="text" value="Select..."/>
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Select the first term proposed course is requested for inclusion in the Course Catalog and/or to be taught.

### 8. Course Designator / Number Fields

Course Designator	<input type="text" value="Select..."/>	Course Number	<input type="text"/>
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Select an approved course designator from pulldown menu.

Enter course number

Notes:

- Adhere to the University Course Number Policy (see [Policy 6900](https://www.policies.vt.edu/assets/6900.pdf)). <https://www.policies.vt.edu/assets/6900.pdf>
- A discontinued course number may not be reused until five (5) years has elapsed.

### 9. Sequenced Course Field

Sequenced Course

Select one of the following, as applicable...

- A - Singular Course, Undergraduate
- B - Series, Undergraduate
- C - Connected, Undergraduate
- G - Singular Course, Graduate
- H - Series, Graduate
- I - Connected, Graduate

Notes:

- Stand-alone course (A or G): Course number must end with the digit “4.”
- Series Course (B or H):
  - Course numbers end with the digits “5 and 6”
  - Course numbers for multi-semester courses are separated by hyphens (i.e., XXX5 – XXX6)
  - XXX5 courses **must** be taken prior to XXX6 course.
  - In most instances, the XXX5 course is a prerequisite to XXX6 course.
  - Two course proposals are submitted in support for approval of both courses in the “Series Course”.
  - Course and ADP titles must be the same for each course in the series.
- Connected Course (i.e., C or I):
  - Course numbers end with the digit “5 and 6”
  - Course numbers for multi-semester course are separated by a comma (i.e., XXX5, XXX6).
  - Courses are **not** required to be taken in order (i.e., XXX6 may be taken before XXX5).
  - Two course proposals are submitted in support for approval of both courses in the “Connected Course”.
  - Course and ADP titles must be the same for each course in the sequence.

If either B, C, H, or I is selected, the below box will appear. Include the course to be included in sequence in this box.

Sequenced Course Number

### 10. Sequence Course Picker

Sequenced Courses Course Picker

Code	Title	

Sequenced Courses:

- Each course in sequence must end with the digit “4.”
- Supports continuing course content using two separate courses (e.g., ABCD 1234 and ABCD 1244).
- Courses in sequence have different course titles (e.g., HIST 1234 History of Window Glass 1600 – 1900, and HIST 1244 History of Window Glass 1900 – Present), or as often used, the same title with a roman numeral (e.g., HIST 1234 History of Window Glass I and HIST 1244 History of Window Glass II).
- In most instances, the first course in the sequence (e.g., ABCD 1234) is a prerequisite to second course in the sequence (e.g., ABCD 1244).
- A course proposal is required to be submitted for each course in the sequence.

11. Department (School) / College Fields

Department	Select Department... ▼
College	Select College... ▼

Notes:

- Courses may only be offered by Academic Units (i.e., College, Department, or School) approved by SCHEV.
- Academies and Centers are not SCHEV approved Academic Units, and therefore, may not offer courses.

12. Default Grade Mode Selector

Default Grade Mode	Select... ▼
--------------------	-------------

Select “A-F” or “Pass/Fail” as the Default Grade

13. Instruction Type(s) Selector

Instruction Types	<input type="checkbox"/> L - Lecture	<input type="checkbox"/> B - Lab
	<input type="checkbox"/> E - Elective Clerkship	<input type="checkbox"/> K - Clerkship
	<input type="checkbox"/> VB - Virtual Campus Lab	<input type="checkbox"/> VL - Virtual Campus Lecture

Select requested “Instruction Types”

14. Crosslisted Course Selector

Crosslisted	<a href="#">Add...</a>
-------------	------------------------

Notes:

If crosslisting course...

- When crosslisted courses are scheduled (face-to-face or virtually), a section of each course in the crosslisting must be scheduled and taught in the same classroom or virtually, at the same time, and taught by the same faculty.
- A single course proposal package is submitted for crosslisted courses.

- Attach letter of support (see example provided below) for crosslist request course agreement as “Additional Documentation” at the end of this form.

Additional Documentation	<input type="button" value="Attach File"/>	Uploaded Files: <input type="text"/> Files To Be Uploaded: <input type="text"/>
--------------------------	--	--

Example of content to include in request for Crosslist letter...

Date:

To: University Registrar  
Cc: Rachel Pitcher, Assistant Registrar for Academic Governance

Re: Crosslisting of ABCD 1234 (EFGH 1234) (IJKL 1234)

The Department of ABCD would like to request the ABCD 1234 (EFGH 1234) (IJKL 1234), Course Title, course crosslisting effective [term year].

It is understood that when this crosslisted course is scheduled that a section of each course in the crosslisting will be scheduled and taught in the same classroom or virtually, at the same time, and taught by the same faculty.

It is also understood that if the ABCD 1234 (Home Department) course is inactivated, and that if the EFGH or IJKL Department would like to continue teaching the course content and the department has faculty with the academic credentials to teach the course content, the department must submit a new course proposal through University Academic Governance for review/approval.

ABCD 1234 (Home Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

EFGH 1234 (Crosslisting Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

IJKL 1234 (Crosslisting Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

- Use course picker to select crosslisted course.

Enter Course Code

Select Course Designator ...

TBD

Department

Select Department ...

College

Select College ...

OK

Cancel

## 15. Conjoint Course Selector

If a conjoint course, choose courses it is conjoint with.

Code

Title



### Notes:

- Pairs of 4000- and 5000-level courses that offer the same content to undergraduate and graduate students, respectively.
- When a conjoint course is scheduled (face-to-face or virtually), a section of each course will be scheduled and taught in the same classroom or virtually, at the same time, and taught by the same faculty.
- The undergraduate course proposal must be approved through University Academic Governance before the graduate proposal can be approved.
- The graduate course/ADP title (see steps 16 & 17) must match the undergraduate course title, with the exception that the Course Long Title must begin with “Advanced” and the Course ADP Title must begin with “Adv”. For example, “Biomaterials” (undergraduate) and “Advanced Biomaterials” (graduate).
- Advantages/Disadvantages of Conjoint versus Standalone courses:
  - **Conjoint courses**

Advantage for establishing a conjoint course if the 4000-level course is already approved through governance, the process to approve the 5000G course is minimal (i.e., just adding one or two graduate learning objectives, and explanation in justification section outlining additional work completed by graduate students).

Disadvantage is that the 4000-level course must be approved through UCC prior to the 5000G level course review/approval. Further, whenever scheduled, a section of the 4000 and 5000G courses must always be scheduled and taught together, in the same classroom or online, and taught by the same faculty.
  - **Standalone courses**

Advantage for establishing a 4000-level and 5000-level course having similar content approved through governance is that sections of each course may be taught together or separately. Further, courses may move through University Academic Governance in parallel. The 5000-level course does not need to wait for the 4000-level course to be approved first.

Disadvantage is that course proposals for both the 4000-level and 5000-level courses require approval through University Academic Governance. Although content may be similar, the



content in all the sections of the 5000-level course will be subject to review/approval during the University Academic Governance process.

### 16. Course Long Title

Long Title	<input type="text"/>
	72 characters remaining

Note:

- 72 character max, mixed case, printed in the University Catalog

Follow appropriate naming conventions ("Topic" for Topic courses and "Advanced" for conjoint graduate-undergraduate level courses)

### 17. Course ADP Title

Course Transcript (ADP) Title	<input type="text"/>
	30 characters remaining

Notes:

- If the "Long Title" is 30 characters or less, the ADP title must be the same.
- If the "Long Title" is greater than 30 characters, the ADP title should be a condensed version of the "Long" course title.
- 30-character space max, mixed case, printed on student academic transcript, and Timetable.
- Use as many of the 30 spaces as is practical to maximize ADP title in support for the course content.

### 18. Course Repeatable Fields

Repeatable	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
------------	------------------------------	--

If No (default), continue to next step.

If Yes, include "Maximum Number of Completions" and "Repeat max credit hours."

Repeatable	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	Maximum Number of Completions	<input type="text"/>
	Repeat max credit hours	<input type="text"/>

### 19. Course Instructional Contact Hours to Credit Hours Fields

Credit Hours	<input type="text"/>
Lecture Hours	<input type="text"/>
Lab + Lab/Studio	<input type="text"/>



Example 1: 3 credit hour course with 2 credit hour lecture and 1 credit hour lab, enter the following in the boxes provided:

Credit Hours "3"

Lecture Hours "2"

Lab + Lab/Studio "3"

Lecture with Lab or Lab only (i.e., Lecture 0 credit hours) Calculator										
Lecture Contact to Credit Hour Calculation	2	Input Proposed Course Lecture Credit Hour(s)								
	1	contact hour	=	1	credithour					
	2	credit hour(s)	X	1	contacthour/credit hour	X	50	minutes/ contact hours	=	100 minutes/ week
	100	minutes/week	x	15	weeks/term	=	1500	aggregated minutes/term		
Lab Credit Contact to Credit Hour Calculation	1	Input Course Proposed Lab Credit Hour(s)								
	3	contact hour	=	1	credithour					
	1	credit hour(s)	X	3	contacthour/credit hour	X	50	minutes/ contact hours	=	150 minutes/ week
	150	minutes/week	x	15	weeks/term	=	2250	aggregated minutes/term		
ResultingCourseTotal Credit Hour Breakdown (H, L, C) for Lecture with Lab or Lab only (i.e., Lecture 0 credit hours)	2	H (Lecture)		3	(L)Lab		3	C (CreditHours)	Proposed Course Total Credit Hours	
ResultingCourseWeeklyMeeting Timefor ProposedLecturewith Lab or Lab only (i.e., Lecture 0 credit hours)	100	minutes/week		150	minutes/week		250	minutes/week	Proposed Course Total Meeting Time per Week	
Resulting Course TermMeeting Time for Proposed Lecturewith Lab or Lab only (i.e., Lecture 0 credit hours)	1500	aggregated minutes/term		2250	aggregated minutes/term		3750	aggregated minutes/term		

Example 2: 3 credit hour course with 2 credit hour lecture and 1 credit hour design lab/studio, enter the following in the boxes provided:

Credit Hours "3"

Lecture Hours "2"

Lab + Lab/Studio "2"

Lecture with Design Lab/Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours) Calculator										
Lecture Contact to Credit Hour Calculation	2	Input Proposed Course Lecture Credit Hour(s)								
	1	contact hour	=	1	credit hour					
	2	credit hour(s)	X	1	contact hour/ credit hour	X	50	minutes/ contact hours	=	100 minutes/ week
	100	minutes/ week	x	15	weeks/term	=	1500	aggregated minutes/ term		
Design Lab/Studio Contact to Credit Hour Calculation	1	Input Proposed Course Design Lab/Studio Credit Hour(s)								
	1.5	contact hour	=	1	credit hour					

	1	credit hour(s)	x	1.5	contact hour/ credit hour	x	50	minutes/ contact hours	=	75	minutes/ week
	75	minutes/ week	x	15	weeks/term	=	1125	aggregated minutes/ term			
Resulting Course Total Credit Hour Breakdown (H, L, C) for Design Lab Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours)	2	H (Lecture)		2	(L) Design Lab/Studio (Note: calculation is rounded to whole number)		3	C (Credit Hours)		<b>Proposed Course Total Credit Hours</b>	
Resulting Course Weekly Meeting Time for Proposed Lecture with Design Lab/Studio or Design Lab/Studio only (i.e., Lecture 0 credit hours)	100	minutes/ week		75	minutes/ week		175	minutes/ week		<b>Proposed Course Total Meeting Time per Week</b>	
Resulting Course Term Meeting Time for Proposed Lecture with Design Lab/Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours)	1500	aggregated minutes/ term		1125	aggregated minutes/ term		2625	aggregated minutes/ term		<b>Proposed Course Total Meeting Time per Term</b>	

## 20. Course Prerequisites Fields

Prerequisites

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	<input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>

Description Prerequisites

Note: The "Description Prerequisites" entry box is for prerequisites that are not enforced by banner. For example, "Junior Standing"

In support for using the above "Prerequisite" and "Descriptive Prerequisites" input tools, examples have been provided below:

**Example 1:** "Prerequisite" satisfied by the completion of the two required courses connected using "And" logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	<input type="button" value="v"/>	COMM 2024	<input type="text"/>	UG <input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>
And <input type="button" value="v"/>	<input type="button" value="v"/>	MKTG 3504	<input type="text"/>	UG <input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>

Description Prerequisites

Note: in this example School of Communication will need to request and attach (using tool at the end of this form) letters of support from MKTG.

**Example 2:** "Prerequisite" satisfied by the completion of one of four courses using "Or" logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	CS 1114		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1574		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1004		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	CS 2064		UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: In this example, MATH Department will need to request and attach (using the form attachment tool at the end of this form) letters of support from CS and ECE.

**Example 3:** Prerequisite satisfied by the completion of a specific course and one of the two courses listed in brackets using both “And” and “Or” logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	FREC 2214		UG ▼	▼	▼	✖ ↑ ↓
And ▼	( ▼	MATH 2214		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	MATH 1226		UG ▼	) ▼	▼	✖ ↑ ↓

Description Prerequisites

Note: in this example FREC Department will need to request and attach (using the form attachment tool at the end of this form) letters of support from MATH.

**Example 4:** Prerequisite including “Min Grade/Score” restriction.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	ECE 3105	C-	UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: When including a minimum grade requirement for a prerequisite course, please include data/information to clearly show the need for that minimum grade is required to be successful in the course. Minimum grade prerequisites are not to be used to limit enrollment in courses.

**Example 5:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Pre: Senior Standing

Notes:

- Description Prerequisite - Courseleaf will key on “Pre:” when pulling this enrollment prerequisite requirement into the Course Catalog Description. In this content, “Pre:” must be stated prior to enrollment prerequisite requirement.

- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

**Example 6:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓
Description Prerequisites							
Pre: Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural & Global Aware.							

**Notes:**

- Description Prerequisite - In support for recording this requirement in the Catalog Description, “Pre:” must be stated prior to enrollment prerequisite requirement.
- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

**Additional Guidance Notes:**

- Consider including a description of material taught in the prerequisite course that will contribute to the student success in the course in the academic level justification (step 6).
- A prerequisite does not by itself, justify course level nor is a prerequisite necessary for a subsequent level.
- Permission of instructor is implied and does not need to be listed.
- Do not list prerequisites for prerequisites.
- For Graduate Courses, the default prerequisite is “Pre: Graduate Standing.”

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓
Description Prerequisites							
Pre: Graduate Standing							

- If a graduate course requires a graduate course as a prerequisite, the “Pre: Graduate Standing” is not needed.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	COMM 5024		GR ▼	▼	▼	✖ ↑ ↓
Description Prerequisites							

- Courses numbered lower than 5000 are not permitted as prerequisites for graduate courses.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as prerequisite requirement:
  - For a course revision, a letter of support is only needed for a prerequisite that has been added as a new requirement as part of that course revision.

## 21. Course Corequisite Fields

Corequisite

Code	Title	
		+

Description Corequisites

Notes:

- The “Corequisite” entry tool may only be used of a single corequisite, or for multiple corequisites using “And” logic statement (Example 1).
- The "Description Corequisites" entry box is for multiple corequisites containing “Or” logic statement (Example 2).

In support for using the above “Corequisite” and “Description Corequisite” input tools, examples have been provided below:

Example 1: Single Corequisite or multiple corequisites connected using “And” logic statement.

Corequisite

Code	Title	
PHYS 1055	Introduction to Astronomy	+
		✖

Description Corequisites

Note: Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content.

Example 2: Corequisite that using “Or” logic, or combination of “And” and “Or” logic statement.

Corequisite

Code	Title	
		+

Description Corequisites

Co: PHYS 2325 or MATH 1226

Notes:

- Noting that the above “Corequisite” input tool only supports courses using “And” logic, the “Corequisite” tool may not be used for the requested corequisites using “Or” or mixed (“And” & “Or”) logic.
- “Description Corequisites” - Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content provided in this box.
- In this example PHYS Department will need to request and attach (using the form attachment tool at the end of this form) letters of support from MATH.

Additional Guidance:

- Course corequisites cannot be automatically checked by the course enrollment process (i.e., Banner) and therefore must be manually verified to be satisfied by college/department/school staff.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as corequisite requirement:
  - For a course revision, a letter of support is only needed for a corequisite that has been added as a new requirement as part of that course revision.

Part I: Course Information

## Part I: Course Information

### 22. Catalog Description Field

Catalog Description



Notes:

- Brief description of the course content as it will appear in the Course Catalog.
- To promote consistency in the Catalog Course Descriptions, use short concise sentences or phrases (declarative statements).
- Catalog Description (content) should align with Learning Objectives (outcomes) and Topic Syllabus (topics).
- Use key words/concepts to promote continuity/alignment between the Catalog Description (content), Learning Objectives (outcomes), and Topic Syllabus (topics).
- If course may be repeated for credit. In addition to checking “Repeatable” “Yes” on this proposal form, include statement “May be repeated \_\_\_\_ times with different content for a maximum of \_\_\_\_ credit hours.” at the end of the catalog description.

Example to illustrate a 3-credit course: “May be repeated 2 times with different content for a maximum of 9 credit hours.”

- If there is content duplication between proposed course and another currently approved course, and students may not receive credit for completing both, include statement “Duplicates \_\_\_\_” or “Course credit will not be awarded for both \_\_\_\_ and \_\_\_\_” or words to this effect. Do not state “partial duplication.”
- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6), include content taught in both courses. To illustrate:

Begin with statement providing overview, followed by XXX5: content taught in this course; XXX6: content taught in this course.

- Example for a 1015-1016 series course:  
“Introduction to oral and written communication. 1015: Focus on oral and written







communication in interpersonal, small group, and public contexts, including intercultural communication. Special emphasis on the writing process, audience, listening, conflict resolution, critical analysis, and communication in digital and visual media. 1016: Continued study in oral and written communication skills for small group and public contexts. Focus on practical applications in ethical research and information gathering, audience analysis and adaptation, message development, and oral, written, and visual presentations by individuals and groups. May not receive credit for both 1016 and 2004.”

- Example for a 1115, 1116 connected course:
 

“Examines the history of the United States through intersections of politics, economics, sciences, the arts, and significant social movements. Considers how the modern United States has emerged through the interactions of diverse ethnic, racial, national, class, and religious groups. 1115: pre-Columbian societies through Civil War; 1116: Reconstruction through present.”
- Distinguishing between series/connected and sequenced courses:
  - As illustrated above, ...
    - “Series” course (e.g., ABCD 1235-1236) must be taken in order (i.e., 1st is usually a pre-requisite for 2nd course in series).
    - “Connected” course (e.g., ABCD 1235, 1236) may be taken in either order.
    - Both courses in the series or connected course have the same title (e.g., HIST 1235-1236 History of Window Glass).
    - Both courses have the same instructional contact to credit hour structure.
    - One proposal is submitted.
  - Whereas “Sequenced” courses...
    - Are made up of two separate courses (e.g., ABCD 1234 and ABCD 1244),
    - Course titles are different [(e.g., HIST 1234 History of Window Glass 1600 – 1900, and HIST 1244 History of Window Glass 1900 – Present), or what is often used, the same title with a roman numeral (e.g., HIST 1234 History of Window Glass I and HIST 1244 History of Window Glass II)].
    - Instructional contact to credit hour structure for “Sequenced” courses do not have to be the same for both courses in sequence.
    - A course proposal is submitted for each course in the sequence.
- Conjoint Courses: Catalog Description must be identical for both courses, except the graduate course will include “Pre: Graduate standing.” Both courses should have the same instructional contact to credit hour structure.

### 23. Course Learning Objective Fields

Learning Objectives

Having successfully completed this course, the student will be able to:		
1	<input type="text"/>	
2	<input type="text"/>	
3	<input type="text"/>	

**Notes:**

- Use key words/concepts/phrases to promote continuity/alignment between the Catalog Description (content), Learning Objectives (outcomes), and Topic Syllabus (topics).

- The objectives must be measurable.
- State what measurable capabilities, skills, knowledge, proficiency, and/or expertise will students gain in this course.
- Do not list assignments, but state measurable learning outcomes students are expected to gain from those assignments.
- Although not an all-inclusive list, “Attachment A” provides a list of action verbs in support for writing measurable Learning Objective outcomes.
- Consideration may be given to action verbs not found on Attachment A, but that are common to discipline.
- Lower academic-level verbs are marked with \*.
- When appropriate, consider using higher graduate academic-level learning outcomes when writing upper-level undergraduate and graduate course Learning Objectives.
- If applicable to course content, lower-level verbs may be used provided that the majority of the action verbs are in alignment with the requested academic level.
- While one action verb per learning objective is preferred, additional action verbs may be used if the verbs are closely aligned, and the learning objective outcome can still be assessed in the context of both action verbs.
- Ensure the use of punctuation at the end of each learning objective is consistent for all objectives.
- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6) structure the Learning Objectives using:
  - Header “XXX5” to present Learning Objectives that align with presentation of content taught in Catalog Description and Topic Syllabus for the XXX5 course.
  - Header “XXX6” present Learning Objectives that align with presentation of content taught in Catalog Description and Topic Syllabus for this XXX6 course.
- Topics Course: Write Learning Objectives broad enough that they support the two to three sample Syllabus topics provided in the course proposal.
- Conjoint Courses: Learning Objectives must be identical for both the 4000 and 5000G level courses, with the exception that the graduate level course must include one or two additional learning objectives to address the advanced learning outcomes assessed at the graduate level.

## 24. Course Justification Field

Justification - Purpose/Reason For the Course

Notes:

- Paragraph to justify why the course is needed. Specify the reason why the proposed course should be taught at VT (*required for all course proposals*).
- Include as applicable:
  - Argument(s) establishing the educational significance/uniqueness of the proposed course

- with respect to a curriculum or program of study.
- How this course offering will benefit/support students in pursuit of an area of study.
- Simply stating that course is not currently taught at VT does not provide an adequate justification.
- Avoid justification based upon faculty competence or expertise, pressure or critiques from external entities, and/or student dissatisfaction with existing course(s).

## 25. Required or Recommended Text/Materials Fields

Required or Recommended Text

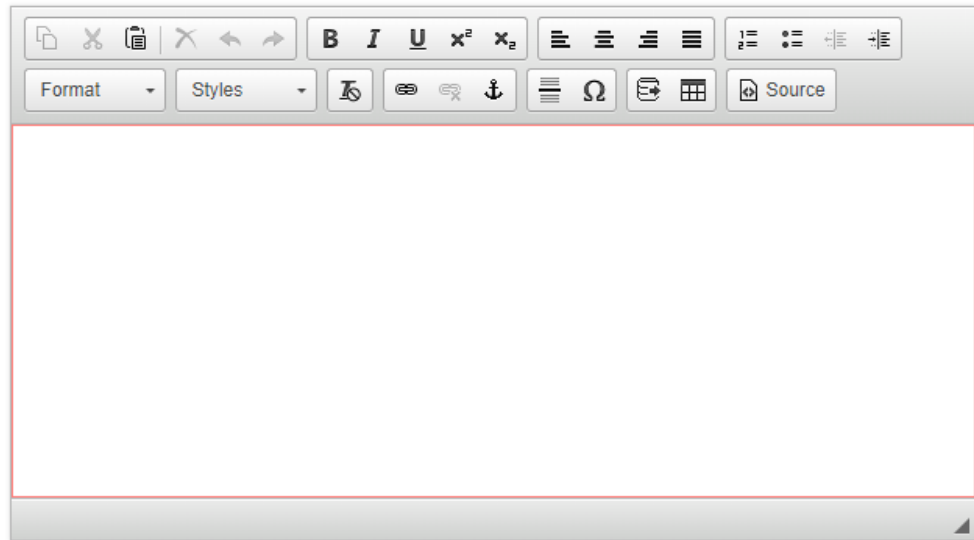
Text(s)/Materials		+
1		✖
2		✖

Notes:

- List text/material that student will need to purchase, that will be helpful to have but students are **not** required to purchase, and/or materials that will be provided to the students at no cost, as applicable.
- If there is no required text, state “Required: None”, and provide justification as to why there is no required text in box number “1”, followed by examples of materials that will be used in subsequent boxes “2”, “3”, ..., as applicable.
- If applicable, consider listing supplemental course materials and teaching aids that may be used. For example:
  - supplementary texts, journal articles, periodicals, films, and courseware packets, websites, etc.
  - Do not attempt to provide an exhaustive list.
- Apply consistent use of APA or MLA format to cite Text(s)/Material(s), order citations alphabetically, and include reference to Text(s) total pages or applicable number of pages to be used from a text. For example:
  - APA - Author Last name, Initials. (Year of publication). *Title of work*. Publisher name. Pp.
  - MLA- Author Last name, First name. *Title of work*. Publisher, Year of publication. Pp.
- Topics Courses: Provide at least two example reading lists to illustrate the assigned “Text(s)/Material(s)” for each topic example provided.
- Seminar Course: Consider, as/if applicable, including example(s) of reading list to illustrate the assigned “Text(s)/Material(s)” that may be used in support for each seminar topic example provided.
- Conjoint course...”5000G” course text should include same text as 4000 UG course but may include additional “Text(s)/Material(s)” in support for additional graduate level learning objective(s).

## 26. Course Topic Syllabus Field

### Topic Syllabus



**Notes:**

- Topic Syllabus may be reviewed by faculty and staff unfamiliar with the subject matter; therefore, avoid jargon and define any acronyms.
- Use key words/concepts to promote continuity/alignment between the Catalog Description, Learning Objectives, and Topic Syllabus.
- Avoid beginning Syllabus topics with action verbs that makes topic read like Learning Objectives or assignments.
- Do not list Assignments, rather state skill/concept taught in support of the successful completion of course assignments.
- List topics under heading “Topic” and present percentage of course time for each topic under header “Percentage of Course.”
- If a topic percentage is greater than 20%, a breakdown of sub-topics is to be listed.
- The percentage of all course topics must add up to a “Total” of “100%”, as noted under applicable header columns.
- To Illustrate:

Topics	Percent of Course
Topic 1	30%
Subtopic 1	
Subtopic 2	
Topic 2	20%
Topic 3	20%
Topic 4	15%
Topic 5	15%
Total	100%

- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6) structure Topic Syllabus using:

- Header “XXX5” followed by topics.
- Header “XXX6” followed by topics.
- Topics Courses: Provide at least two example Topic Syllabi to illustrate the content to be covered when the courses focus on different topics.
- Conjoint Courses: Topic Syllabus must be identical for both undergraduate and graduate courses.

27. Course Additional Document – Attach File(s)

Additional Documentation

Uploaded Files:

Files To Be Uploaded:

28. Course Proposal – Cancel \_ Save Changes \_ Admin Save \_ Start Workflow Tabs

### III. Pathways Course Guidelines:

**Note:** Boxes outlined in **Red** are required fields and must be completed prior to moving proposal forward to Courseleaf workflow.

#### 1. Course Request Type Field

##### New Course Proposal

Course Request Type

Select course type, as applicable:  
 Standard  
 Pathways  
 Pre/Co Requisite

**Notes:**

- The following guideline content assumes “Pathways” “Course Request Type” selected.
- When using this Guideline for a course revision...
  - Fields will be populated with previously approved course content.
  - Edits to this content will be “redlined.”

#### 2. Contact Information Fields

**Contact Information:**

Department

Contact Name

Contact Phone  Contact E-mail

Provide associated Dept/School contact information for person proposing new or revised course. This is the person who will be reached out to during 15-DR to address proposal comments. However, this person is not associated with workflow if they were not the user to enter the proposal.

#### 3. Scorecard Metric Fields

Is this a Scorecard  Yes  No

**Course?**

If No, continue to next step.

If Yes, select applicable Scorecard Metrics, and provide justification for each selected metric in “Justification” box provided.

- Scorecard Metrics  Study Abroad  Service Learning  
 Experiential  Undergraduate Research

Scorecard Course - Justification

**Notes:**

When writing the justification for the selected Scorecard Metric(s), consider the following Scorecard Metric “Definition” and “Interpretive Guidance,” as applicable:

### **Study Abroad**

#### Definition:

Courses that carry this attribute should include meaningful participation of all enrolled students in learning activities outside of the United States. The activities should be germane to the learning objectives of the course and appropriate for the discipline. Faculty members directing these courses must be in compliance with university policies and procedures concerning international travel programs. The number of course credits should be proportional to the duration of the activity, keeping in mind that a 1-credit on-campus laboratory course meets 30-45 hours per semester.

#### Interpretive Guidance:

This classification is for a Virginia Tech credit-bearing course. The attribute should be attached to a course only when all sections of the course are taught as part of an education abroad experience.

### **Service Learning**

#### Definition:

Courses that carry this attribute should include a meaningful participation of all students enrolled in the course in at least 15 hours of community service that is germane to the learning objectives of the course. The learning sites are normally off campus in community settings and the students are expected to engage directly with clients wherever possible. The participating students do so as volunteers in the settings but may receive grades for the course. This course does not have to be registered with the Service Learning Center.

#### Interpretive Guidance:

Service learning is not simply volunteering in the community as an "add on" to a course. The service teaming must be an extension of the classroom experience. Service teaming pedagogy also involves some form of reflection to create the connection and integration of the service learning experiences with the course content.

### **Experiential**

#### Definition:

“Courses that carry this attribute should include a meaningful participation of all enrolled students in work experiences akin to internships (time in a work-place setting), or projects that have real-world clients, or products and outcomes, and/or engage students in activities that simulate workplace responsibilities and performance. The learning sites are normally off campus in work place settings though some on-campus activities may qualify. The participating students may be compensated and the courses may be graded and required for graduation.”

#### Interpretive Guidance:

Focus on the phrase, "akin to internship. " Courses focused on developing basic skills to prepare students for an internship experience should not carry the experiential learning attribute. A course focused on developing technical writing skill only becomes "experiential teaming" when the writing is for a "real-world client." Students may develop design skills in a course. The course is experiential when they use the design skills to solve a problem for a "real world client." If the experience in class could legitimately appear on a resume as "work-related experience," the experiential learning attribute is appropriate.

### **Undergraduate Research**

#### Definition

"Courses that carry this attribute include meaningful participation of all students enrolled in this course in intellectual or creative activity, characteristic of the discipline. With faculty

supervision, the student defines the topic, designs and carries out the methodology, and presents the results in a manner consistent with the goals of the activity and the course."

Interpretive Guidance:

Students must carry out all elements of the research process resulting in an original intellectual or creative contribution appropriate to the discipline. Team projects are acceptable as long as each member of the team is participating in the overall research process. While many courses are designed to develop a student's research abilities, only those courses in which a student produces original research should carry the undergraduate research attribute.

4. First Year Experience Fields

First Year  Yes  No

Experience Course?

If No, continue to next step.

If Yes, record whether FYE Director has approved proposed course for FYE...

FYE Director  Yes  No

Approval

If No, request and attach FYE Director letter before moving proposal forward in Courseleaf workflow.

If Yes, attach FYE Director approval letter.

FYE Approval Letter

Attach File

Uploaded Files:

Files To Be Uploaded:

5. Topic Course Fields

Is this a Topics  Yes  No

Course?

If No, continue to next step.

If Yes, consider the following criteria in support for this Topics Course...

Topics Course Text Criteria....

- If a course may be repeated with different content for credit, please add "Topics" to the course title. This will have the advantage of allowing different subject topics to be presented on the student transcript. If this direction is taken, begin the course title and ADP title with the word "Topics" in the "Long Title" and "Course Transcript (ADP) Title" fields boxes below (e.g., title: Topics in Global Public Policies, ADP: Topics Global Public Policies)
- Include repeatability statement in Catalog Description (e.g., May be repeated \_\_\_\_\_ times with different content for a maximum of credit hours.)
- Write Learning Objectives broad enough that they support the two to three sample Syllabus topics provided in the course proposal.
- Provide at least two example reading lists to illustrate the assigned "Texts and Special Teaching Aids" and/or learning materials for different topics.



- Provide at least two example Topic Syllabi to illustrate the content to be covered when the courses focus *on* different topics.

## 6. Academic Level Fields

Academic Level

- AS - Associate
- GR - Graduate
- MD - Medicine
- PR - Professional
- UG - Undergraduate

Academic Level -  
Justification

### Notes:

Select applicable “Academic Level” and include paragraph in the provided “Academic Level – Justification” box to justify and/or explain why this course is requested to be taught at the selected academic level.

- Begin paragraph with statement, “Course is taught at the X000-level because...”
- Consider the following questions, as applicable, when writing the level justification:
  - What does the student need to bring to the course to succeed?
  - What does the student need to succeed while in the course?
  - What will the student take from the course and apply toward the successful completion of their area of study?
- As applicable, frame level justification for course based on the value and/or contribution the placement of the course at the X000-level offers a student toward the successful completion of the course and/or academic program, giving consideration to the following:
  - Skills/concepts acquired by students through courses completed during previous academic level(s) that support student success in the course. For example:
    - Program courses taken at 1000, 2000, and/or 3000-level for a 4000-level course...
      - “... use of laboratory equipment, familiarity with circuit design and analysis techniques learned during sophomore year...”
      - “... requires integration of knowledge learned in required courses normally taken during sophomore or junior years...”
    - Program courses taken at UG level for a 5000-level course...
      - “... builds upon undergraduate skills and knowledge in an applied, professional format while introducing advanced theoretical content...”
  - Skills/concepts acquired by students through the completion of the course prerequisite(s) that support student success in the course. For example:
    - Content taught in UG prerequisite for an UG course...
      - “...background in cell regulatory process, protein function, and other biological principles taught in prerequisites enabling student to think in language of chemical structure and reactivity...”
  - Expectations based upon student ability to comprehend, assimilate, discuss, and/or apply course material appropriate for requested course academic level. For example:
    - Academic rigor of course (e.g., introductory, intermediate, or advanced content/material; course workload);

- Tasks (e.g., concept memorization/application, communication skills, problem solving, data interpretation and/or analysis, team projects, research); and/or
- Maturity (e.g., cognitive development, critical thinking skills, life/academic/work experiences, cumulative academic knowledge).
- Rationale presented by the department/school in support for timing of when a course is taken within a particular curriculum structure or program of study. The level of difficulty of the subject matter is not the basis for this level justification, but rather the placement of the course in a particular curriculum structure or program of study as determined appropriate by the department/school.
- The intent of the above is to provide a variety of topical areas that may be used in support of the course level justification. Course level justification should be a concise/succinct statement using only those topical areas that apply.

## General Information

### 7. Effective Term Field

Effective Term

Select the first term proposed the course is requested for inclusion in the Course Catalog and/or to be taught.

### 8. Course Designator / Number Fields

Course Designator  Course Number

Select an approved course designator from the pulldown menu.

Enter course number

Notes:

- Adhere to the University Course Number Policy (see [Policy 6900](https://www.policies.vt.edu/assets/6900.pdf)).  
<https://www.policies.vt.edu/assets/6900.pdf>
- A discontinued course number may not be reused until five (5) years have elapsed.

### 9. Sequenced Course Field

Sequenced Course

Select one of the following, as applicable...

- A - Singular Course, Undergraduate
- B - Series, Undergraduate
- C - Connected, Undergraduate
- G - Singular Course, Graduate
- H - Series, Graduate
- I - Connected, Graduate

Notes:

- Stand-alone course (A): Course number must end with the digit “4.”
- Series Course (B):
  - Course numbers end with the digits “5 and 6”
  - Course numbers for multi-semester courses are separated by hyphens (i.e., XXX5 – XXX6)
  - XXX5 courses **must** be taken prior to XXX6 course.
  - In most instances, the XXX5 course is a prerequisite to XXX6 course.
  - One course proposal is submitted in support for approval of both courses in the “Series Course”.
  - Course and ADP titles must be the same for each course in the series.
- Connected Course (i.e., C):
  - Course numbers end with the digit “5 and 6”
  - Course numbers for multi-semester course are separated by a comma (i.e., XXX5, XXX6).
  - Courses are **not** required to be taken in order (i.e., XXX6 may be taken before XXX5).
  - One course proposal is submitted in support for approval of both courses in the “Connected Course”.
  - Course and ADP titles must be the same for each course in the sequence.

If either B, or C is selected, the below box will appear. Include the course to be included in sequence in this box.

Sequenced Course Number	
-------------------------	--

### 10. Sequence Course Picker

Sequenced Courses Course Picker	<table border="1"> <thead> <tr> <th style="padding: 5px;">Code</th> <th style="padding: 5px;">Title</th> <th style="padding: 5px; text-align: center;">+</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> </tr> </tbody> </table>	Code	Title	+			
Code	Title	+					

Sequenced Courses:

- Each course in a sequence must end with the digit “4.”
- Supports continuing course content using two separate courses (e.g., ABCD 1234 and ABCD 1244).
- Courses in sequence have different course titles (e.g., HIST 1234 History of Window Glass 1600 – 1900, and HIST 1244 History of Window Glass 1900 – Present), or as often used, the same title with a roman numeral (e.g., HIST 1234 History of Window Glass I and HIST 1244 History of Window Glass II).
- In most instances, the first course in the sequence (e.g., ABCD 1234) is a prerequisite to the second course in the sequence (e.g., ABCD 1244).
- A course proposal is required to be submitted for each course in the sequence.

### 11. Department (School) / College Fields

Department	<input style="width: 100%; border: 1px solid red;" type="text" value="Select Department..."/>
College	<input style="width: 100%; border: 1px solid red;" type="text" value="Select College..."/>

Notes:

- Courses may only be offered by Academic Units (i.e., College, Department, or School) approved by SCHEV.
- Academies and Centers are not SCHEV approved Academic Units, and therefore, may not offer courses.
- Departments and Colleges should populate in this field after you select the Course Designator. Make sure the Department and College selections include their numerical codes. If they do not, the proposal will not route correctly and may cause delays to workflow.

12. Default Grade Mode Selector

Default Grade Mode

Select "A-F" or "Pass/Fail" as the Default Grade

13. Instruction Type(s) Selector

Instruction Types  L - Lecture  B - Lab  
 E - Elective Clerkship  K - Clerkship  
 VB - Virtual Campus Lab  VL - Virtual Campus Lecture

Select requested "Instruction Types"

14. Crosslisted Course Selector

Crosslisted [Add...](#)

Notes:

If crosslisting course...

- When crosslisted courses are scheduled (face-to-face or virtually), a section of each course in the crosslisting must be scheduled and taught in the same classroom or virtually, at the same time, and taught by the same faculty.
- A single course proposal package is submitted for crosslisted courses.
- Attach letter of support (see example provided below) for crosslist request course agreement as "Additional Documentation" at the end of this form.

Additional Documentation

Uploaded Files:

Files To Be Uploaded:

Example of content to include in request for Crosslist letter...

Date:

To: University Registrar  
Cc: Rachel Pitcher, Assistant Registrar for Academic Governance

Re: Crosslisting of ABCD 1234 (EFGH 1234) (IJKL 1234)

The Department of ABCD would like to request the ABCD 1234 (EFGH 1234) (IJKL 1234), Course Title, course crosslisting effective [term year].

It is understood that when this crosslisted course is scheduled that a section of each course in the crosslisting will be scheduled and taught in the same classroom or virtually, at the same time, and taught by the same faculty.

It is also understood that if the ABCD 1234 (Home Department) course is inactivated, and that if the EFGH or IJKL Department would like to continue teaching the course content and the department has faculty with the academic credentials to teach the course content, the department must submit a new course proposal through University Academic Governance for review/approval.

ABCD 1234 (Home Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

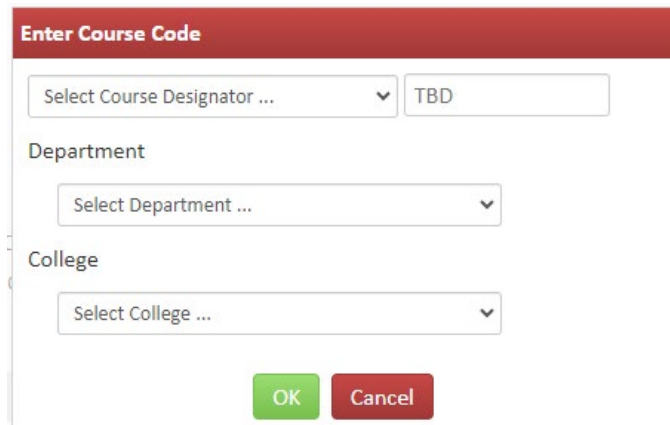
EFGH 1234 (Crosslisting Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

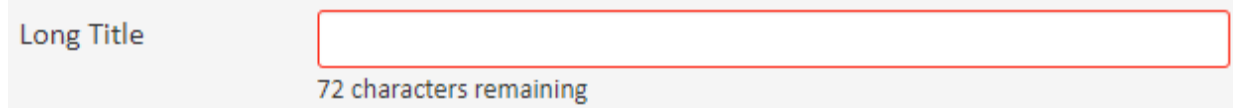
IJKL 1234 (Crosslisting Department/School)

\_\_\_\_\_/\_\_\_\_\_  
Dean, Department Head/School Director, or Designee / Date

- Use course picker to select crosslisted course.



### 15. Course Long Title



Note:

- 72 character max, mixed case, printed in the University Catalog

16. Course ADP Title

Course Transcript (ADP) Title	<input type="text"/>
	30 characters remaining

Notes:

- If the “Long Title” is 30 characters or less, the ADP title must be the same.
- If the “Long Title” is greater than 30 characters, the ADP title should be a condensed version of the “Long” course title.
- 30-character space max, mixed case, printed on student academic transcript, and Timetable.
- Use as many of the 30 spaces as is practical to maximize ADP title in support for the course content.

17. Course Repeatable Fields

Repeatable	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
------------	------------------------------	--

If No (default), continue to next step.

If Yes, include “Maximum Number of Completions” and “Repeat max credit hours.”

Repeatable	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	Maximum Number of Completions	<input type="text"/>
	Repeat max credit hours	<input type="text"/>

18. Course Instructional Contact Hours to Credit Hours Fields

Credit Hours	<input type="text"/>
Lecture Hours	<input type="text"/>
Lab + Lab/Studio	<input type="text"/>

Notes:

- To determine contact to credit hour for a course based on the given instructional delivery, reference the requirements of the Instructional Credit Hour and Instructional Contact Minutes and/or the Instructional Credit Hour and Instructional Contact Minutes Calculator found at <https://registrar.vt.edu/governance.html>.
- The following is a summary of the contact to credit hour structure for the most common instructional delivery methods (Reference: <https://www.registrar.vt.edu/faculty-staff/instructional-minutes.html>)
  - Lecture 1 contact hour = 1 credit hour
  - Lab 3 contact hours = 1 credit hour
  - Design Lab/Studio 1.5 contact hours = 1 credit hour

- Recitation 1 contact hour = 1 credit hour

Example 1: 3 credit hour course with 2 credit hour lecture and 1 credit hour lab, enter the following in the boxes provided:

Credit Hours "3"  
 Lecture Hours "2"  
 Lab + Lab/Studio "3"

Lecture with Lab or Lab only (i.e., Lecture 0 credit hours) Calculator										
Lecture Contact to Credit Hour Calculation	2	Input Proposed Course Lecture Credit Hour(s)								
	1	contact hour	=	1	credit hour					
	2	credit hour(s)	X	1	contact hour/credit hour	X	50	minutes/ contact hours	=	100 minutes/ week
	100	minutes/week	x	15	weeks/term	=	1500	aggregated minutes/term		
Lab Credit Contact to Credit Hour Calculation	1	Input Course Proposed Lab Credit Hour(s)								
	3	contact hour	=	1	credit hour					
	1	credit hour(s)	X	3	contact hour/credit hour	X	50	minutes/ contact hours	=	150 minutes/ week
	150	minutes/week	x	15	weeks/term	=	2250	aggregated minutes/term		
Resulting Course Total Credit Hour Breakdown (H, L, C) for Lecture with Lab or Lab only (i.e., Lecture 0 credit hours)	2	H (Lecture)		3	(L) Lab		3	C (Credit Hours)	Proposed Course Total Credit Hours	
Resulting Course Weekly Meeting Time for Proposed Lecture with Lab or Lab only (i.e., Lecture 0 credit hours)	100	minutes/week		150	minutes/week		250	minutes/week	Proposed Course Total Meeting Time per Week	
Resulting Course Term Meeting Time for Proposed Lecture with Lab or Lab only (i.e., Lecture 0 credit hours)	1500	aggregated minutes/term		2250	aggregated minutes/term		3750	aggregated minutes/term		

Example 2: 3 credit hour course with 2 credit hour lecture and 1 credit hour design lab/studio, enter the following in the boxes provided:

Credit Hours "3"  
 Lecture Hours "2"  
 Lab + Lab/Studio "2"

Lecture with Design Lab/Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours) Calculator										
Lecture Contact to Credit Hour Calculation	2	Input Proposed Course Lecture Credit Hour(s)								
	1	contact hour	=	1	credit hour					
	2	credit hour(s)	X	1	contact hour/ credit hour	X	50	minutes/ contact hours	=	100 minutes/ week
	100	minutes/ week	x	15	weeks/term	=	1500	aggregated minutes/ term		
Design Lab/Studio Contact to Credit Hour Calculation	1	Input Proposed Course Design Lab/Studio Credit Hour(s)								
	1.5	contact hour	=	1	credit hour					

	1	credit hour(s)	x	1.5	contact hour/ credit hour	x	50	minutes/ contact hours	=	75	minutes/ week
	75	minutes/ week	x	15	weeks/term	=	1125	aggregated minutes/ term			
Resulting Course Total Credit Hour Breakdown (H, L, C) for Design Lab Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours)	2	H (Lecture)		2	(L) Design Lab/Studio (Note: calculation is rounded to whole number)		3	C (Credit Hours)		<b>Proposed Course Total Credit Hours</b>	
Resulting Course Weekly Meeting Time for Proposed Lecture with Design Lab/Studio or Design Lab/Studio only (i.e., Lecture 0 credit hours)	100	minutes/ week		75	minutes/ week		175	minutes/ week		<b>Proposed Course Total Meeting Time per Week</b>	
Resulting Course Term Meeting Time for Proposed Lecture with Design Lab/Studio or Design Lab/ Studio only (i.e., Lecture 0 credit hours)	1500	aggregated minutes/ term		1125	aggregated minutes/ term		2625	aggregated minutes/ term		<b>Proposed Course Total Meeting Time per Term</b>	

### 19. Course Prerequisites Fields

Prerequisites

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	<input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>

Description Prerequisites

Note: The "Description Prerequisites" entry box is for prerequisites that are not enforced by banner. For example, "Junior Standing"

In support for using the above "Prerequisite" and "Descriptive Prerequisites" input tools, examples have been provided below:

**Example 1:** "Prerequisite" satisfied by the completion of the two required courses connected using "And" logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	<input type="button" value="v"/>	COMM 2024	<input type="text"/>	UG <input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>
And <input type="button" value="v"/>	<input type="button" value="v"/>	MKTG 3504	<input type="text"/>	UG <input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="x"/> <input type="button" value="u"/> <input type="button" value="d"/>

Description Prerequisites

Note: in this example School of Communication will need to request and attach (using tool at the end of this form) letters of support from MKTG.

**Example 2:** "Prerequisite" satisfied by the completion of one of four courses using "Or" logic.



And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	CS 1114		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1574		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1004		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	CS 2064		UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: in this example MATH Department will need to request and attach (using form attachment tool at the end of this form) letters of support from CS and ECE.

**Example 3:** prerequisite satisfied by the completion of a specific course and one of the two courses listed in brackets using both “And” and “Or” logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	FREC 2214		UG ▼	▼	▼	✖ ↑ ↓
And ▼	( ▼	MATH 2214		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	MATH 1226		UG ▼	) ▼	▼	✖ ↑ ↓

Description Prerequisites

Note: In this example, FREC Department will need to request and attach (using form attachment tool at the end of this form) letters of support from MATH.

**Example 4:** prerequisite including “Min Grade/Score” restriction.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	ECE 3105	C-	UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: When including a minimum grade requirement for a prerequisite course, please include data/information to clearly show the need for that minimum grade is required to be successful in the course. Minimum grade prerequisites are not to be used to limit enrollment in courses.

**Example 5:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Pre: Senior Standing

Notes:

- Description Prerequisite - Courseleaf will key on “Pre:” when pulling this enrollment prerequisite requirement into the Course Catalog Description. In this content, “Pre:” must be stated prior to enrollment prerequisite requirement.

- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

**Example 6:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	<input type="text"/>	<input type="text"/>	▼	▼	▼	✖ ↑ ↓
Description Prerequisites							
<input type="text" value="Pre: Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural &amp; Global Aware."/>							

Notes:

- Description Prerequisite - In support for recording this requirement in the Catalog Description, "Pre:" must be stated prior to enrollment prerequisite requirement.
- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

Additional Guidance Notes:

- Consider including a description of material taught in the prerequisite course that will contribute to the student’s success in the course in the academic level justification (step 6).
- A prerequisite does not by itself, justify course level nor is a prerequisite necessary for a subsequent level.
- Permission of instructor is implied and does not need to be listed.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as a prerequisite requirement:
  - For a course revision, a letter of support is only needed for a prerequisite that has been added as a new requirement as part of that course revision.

## 20. Course Corequisite Fields

Corequisite

Code	Title	
		+

Description Corequisites

Notes:

- The "Corequisite" entry tool may only be used of a single corequisite, or for multiple corequisites using "And" logic statement (Example 1).
- The "Description Corequisites" entry box is for multiple corequisites containing "Or" logic statement (Example 2).

In support for using the above "Corequisite" and "Description Corequisite" input tools, examples have been provided below:

Example 1: Single Corequisite or multiple corequisites connected using "And" logic statement.

Corequisite

Code	Title		
PHYS 1055	Introduction to Astronomy		✖

Description Corequisites

Note: Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content.

Example 2: Corequisite that using “Or” logic, or combination of “And” and “Or” logic statement.

Corequisite

Code	Title	
		+

Description Corequisites

Co: PHYS 2325 or MATH 1226

Notes:

- Noting that the above “Corequisite” input tool only supports courses using “And” logic, the “Corequisite” tool may not be used for the requested corequisites using “Or” or mixed (“And” & “Or”) logic.
- “Description Corequisites” - Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content provided in this box.
- In this example PHYS Department will need to request and attach (using form attachment tool at the end of this form) letters of support from MATH.

Additional Guidance:

- Course corequisites cannot be automatically checked by the course enrollment process (i.e., Banner) and therefore must be manually verified to be satisfied by college/department/school staff.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as corequisite requirement:
  - For a course revision, a letter of support is only needed for a corequisite that has been added as a new requirement as part of that course revision.

Part I: Course Information

## Part I: Course Information

## 21. Catalog Description Field

Catalog Description

### Notes:

- Brief description of the course content as it will appear in the Course Catalog.
- To promote consistency in the Course Catalog Course Descriptions, use short concise sentences or phrases (declarative statements).
- Catalog Description (content) should align with Learning Objectives (outcomes) and Topic Syllabus (topics).
- Use key words/concepts to promote continuity/alignment between the Catalog Description (content), Learning Objectives (outcomes), and Topic Syllabus (topics).  
If course may be repeated for credit. In addition to checking “Repeatable” “Yes” on this proposal form, include statement “May be repeated \_\_\_\_\_ times with different content for a maximum of \_\_\_\_\_ credit hours.” at the end of the catalog description. Example to illustrate a 3-credit course: “May be repeated 2 times with different content for a maximum of 9 credit hours.”
- If there is content duplication between proposed course and another currently approved course, and students may not receive credit for completing both, include statement “Duplicates \_\_\_\_\_” or “Course credit will not be awarded for both and \_\_\_\_\_” or words to this effect. Do not state “partial duplication.”
- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6), include content taught in both courses. To illustrate:
  - Begin with statement providing overview, followed by XXX5: content taught in this course; XXX6: content taught in this course.
  - Example for a 1015-1016 series course:
 





“Introduction to oral and written communication. 1015: Focus on oral and written communication in interpersonal, small group, and public contexts, including intercultural communication. Special emphasis on the writing process, audience, listening, conflict resolution, critical analysis, and communication in digital and visual media. 1016: Continued study in oral and written communication skills for small group and public contexts. Focus on practical applications in ethical research and information gathering, audience analysis and adaptation, message development, and oral, written, and visual presentations by individuals and groups. May not receive credit for both 1016 and 2004.”
  - Example for a 1115, 1116 connected course:
 

“Examines the history of the United States through intersections of politics, economics, sciences, the arts, and significant social movements. Considers how the modern United States has emerged through the interactions of diverse ethnic, racial, national, class, and religious groups. 1115: pre-Columbian societies through Civil War; 1116: Reconstruction through present.”
- Distinguishing between series/connected and sequenced courses:
  - As illustrated above, ...
    - “Series” course (e.g., ABCD 1235-1236) must be taken in order (i.e., 1st is usually a pre-

- requisite for 2nd course in series).
- “Connected” course (e.g., ABCD 1235, 1236) may be taken in either order.
- Both courses in the series or connected course have the same title (e.g., HIST 1235-1236 History of Window Glass).
- Both courses have the same instructional contact to credit hour structure.
- One proposal is submitted.
- Whereas “Sequenced” courses...
  - Are made up of two separate courses (e.g., ABCD 1234 and ABCD 1244),
  - Course titles are different [(e.g., HIST 1234 History of Window Glass 1600 – 1900, and HIST 1244 History of Window Glass 1900 – Present), or what is often used, the same title with a roman numeral (e.g., HIST 1234 History of Window Glass I and HIST 1244 History of Window Glass II)].
  - Instructional contact to credit hour structure for “Sequenced” courses do not have to be the same for both courses in sequence.
  - A course proposal is submitted for each course in the sequence.

## 22. Course Learning Objective Fields

### Learning Objectives

Having successfully completed this course, the student will be able to:		
1	<input type="text"/>	
2	<input type="text"/>	
3	<input type="text"/>	

In support of a Pathways Course approval, please indicate which of the Pathways core and/or integrative concepts correspond to each learning objective. For example: “Students will be able to make a compelling oral presentation that demonstrates their understanding of the ethical implications associated with driverless cars [Discourse 3; Ethical Reasoning 2].”

#### Notes:

- Use key words/concepts/phrases to promote continuity/alignment between the Catalog Description, Learning Objectives, and Topic Syllabus.
- The objectives must be measurable.
- What measurable capabilities, skills, knowledge, proficiency, and/or expertise will students gain in this course?
- Do not list assignments, but state measurable learning outcomes students are expected to gain from that assignment.
- Although not an all-inclusive list, “Attachment A” provides a list of action verbs in support for writing measurable Learning Objectives outcome.
- Consideration may be given to action verbs not found on Attachment A, but that are common to discipline.
- Lower academic-level verbs are marked with \*.
- When appropriate, consider using higher graduate academic-level learning outcomes when writing upper-level undergraduate and graduate course Learning Objectives.
- If applicable to course content, lower-level verbs may be used provided that the majority of the

verbs are in alignment with the requested academic level.

- While one action verb per learning objective is preferred, additional action verbs may be used if the verbs are closely aligned, and the learning objective outcome can still be assessed.
- Ensure the use of punctuation at the end of the objectives is consistent for all objectives.
- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6) structure the Learning Objectives using:
  - Header “XXX5” to present Learning Objectives that align with presentation of content taught in Catalog Description and Topic Syllabus for the XXX5 course.
  - Header “XXX6” present Learning Objectives that align with presentation of content taught in Catalog Description and Topic Syllabus for this XXX6 course.
- Topics Courses: Write Learning Objectives broad enough that they support the two to three sample Syllabus topics provided in the course proposal.

### 23. Course Justification Field

Justification - Purpose/Reason For the Course

Notes:

- Paragraph to justify why the course is needed. Specify the reason why the proposed course should be taught at VT (*required for all course proposals*).
- Include as applicable:
  - Argument(s) establishing the educational significance/uniqueness of the proposed course with respect to a curriculum or program of study.
  - How course offering will benefit/support students in pursuit of an area of study.
- Simply stating that a course is not currently taught at VT does not serve as adequate justification.
- Avoid justification based upon faculty competence or expertise, pressure or critiques from external entities, and/or student dissatisfaction with existing course(s).

### 24. Required or Recommended Text/Materials Fields

Required or Recommended Text

Text(s)/Materials <span style="float: right;">+</span>	
1	<div style="border: 1px solid red; height: 30px; width: 100%;"></div> <span style="float: right; color: red; font-size: 1.2em;">✖</span>
2	<div style="border: 1px solid red; height: 30px; width: 100%;"></div> <span style="float: right; color: red; font-size: 1.2em;">✖</span>

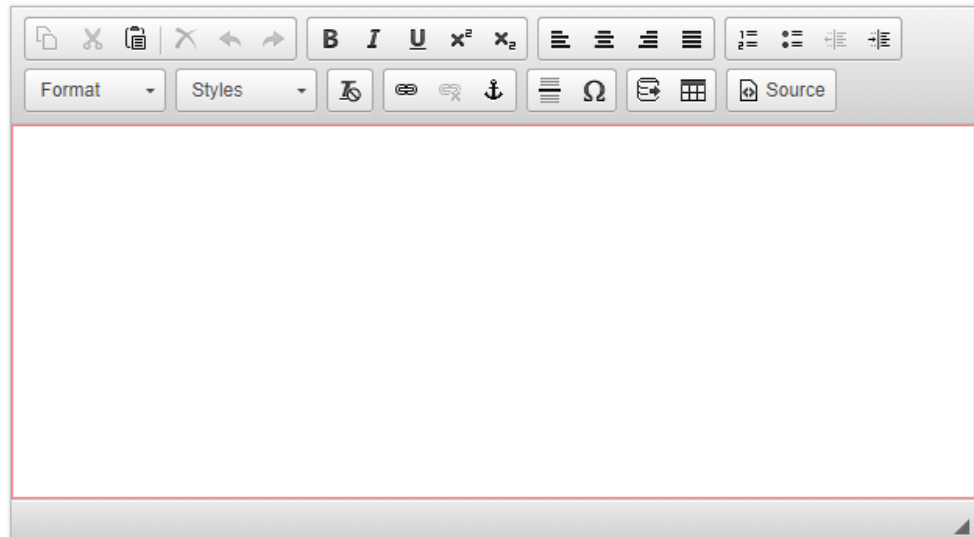
Notes:

- List text/material that student will need to purchase, that will be helpful to have but students are **not** required to be purchased, and/or materials that will be provided to the students at no cost, as applicable.

- If there is no required text, state “Required: None”, and provide justification as to why there is no required text in box number “1”, followed by examples of materials that will be used in subsequent boxes “2”, “3”, ..., as applicable.
- If applicable, consider listing supplemental course materials and teaching aids that may be used. For example: supplementary texts, journal articles, periodicals, films, and courseware packets, websites, etc. Do not attempt to be exhaustive.
- Apply consistent use of APA or MLA format to cite Text(s)/Materials, order citations alphabetically, and include reference to Text(s) total pages or applicable number of pages to be used from a text. For example:  
 APA - Author Last name, Initials. (Year of publication). *Title of work*. Publisher name. Pp.  
 MLA- Author Last name, First name. *Title of work*. Publisher, Year of publication. Pp.
- Topics Courses: Provide at least two example reading lists to illustrate the assigned “Text(s)/Materials” for different topics.
- Seminar Course: Consider, as/if applicable, including example(s) of readinglist to illustrate the assigned “Text(s)/Materials” that may be used in support for different seminar topics.

## 25. Course Topic Syllabus Field

Topic Syllabus



### Notes:

- The Topic Syllabus will be reviewed by faculty and staff unfamiliar with the subject matter; therefore, avoid jargon and define any acronyms.
- Use key words/concepts to promote continuity/alignment between the Catalog Description, Learning Objectives, and Topic Syllabus.
- Avoid beginning Syllabus topics with action verbs that makes topics read like Learning Objectives or assignments.
- Do not list Assignments, rather state skill/concept taught in support of the successful completion of course assignments.
- List topics under heading “Topic” and present percentage of course time for each topic under header “Percentage of Course.”
- If a topic percentage is greater than 20%, a breakdown of sub-topics is to be listed.
- The percentage of all course topics must add up to a “Total” of “100%”, as noted under applicable

header columns.

- To Illustrate:

Topics	Percent of Course
Topic 1	30%
Subtopic 1	
Subtopic 2	
Topic 2	20%
Topic 3	20%
Topic 4	15%
Topic 5	15%
<b>Total</b>	<b>100%</b>

- Series or Connected Courses: (i.e., XXX5 – XXX6 or XXX5, XXX6) structure Topic Syllabus using:
  - Header “XXX5” followed by topics.
  - Header “XXX6” followed by topics.
- Topics Courses: Provide at least two example Topic Syllabi to illustrate the content to be covered when the courses focus on different topics.

Part II: General Education Information

## Part II: General Education Information

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.

Narrative: In the following boxes, describe how this course will fit the mission and each of the three principles (integration, inclusivity, relevance) of Pathways. Use the guiding questions to guide your response. Use the boxes for ‘Mission’, ‘Integration’, ‘Inclusivity,’ and ‘Relevance’ to organize your response. *Limit your response to less than 400 words.*

26. Pathways General Education Mission

### Pathways General Education Mission

Describe how the course fits the mission



## 27. Pathways General Education Principles

Describe how the course fits the Integration Principle

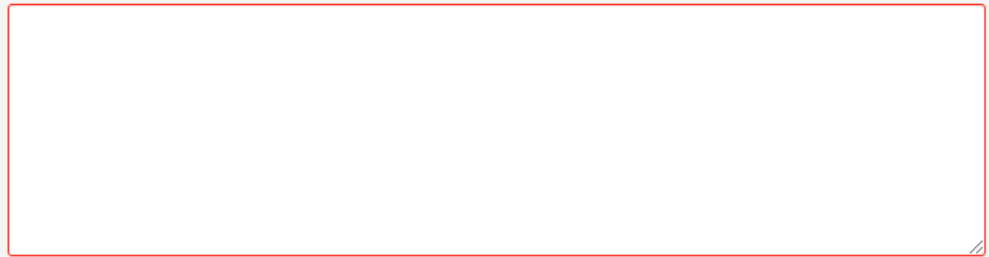


### Integration

The promotion of integration in students’ learning is crucial to students’ ability to create meaning, explore connections, and build knowledge and skills for their academic, professional, civic, and personal lives. Students will meet many of the learning outcomes by taking sequenced courses that build upon one another, adding a dimension of depth to the curriculum. As they participate in one of three paths through general education, undergraduates will have opportunities to make meaning of their general education curriculum through the integration of diverse ways of knowing, recognizing that the whole is truly greater than the sum of its parts. The incorporation of the integrative learning outcomes--Ethical Reasoning and Intercultural and Global Awareness—throughout the curriculum will further enable students to connect the courses and identify various perspectives on these themes. This ability to integrate new learning into their ways of seeing the world will help students build a competency they will need for the rest of their lives.

Guiding questions: What are the types of concepts students will be integrating in this course? What opportunities will students have to integrate those concepts?

Describe how the course fits the Inclusion Principle



### Inclusivity

The Pathways curricular structure will address the needs and challenges of populations of students and acknowledge the diverse paths they have taken to Virginia Tech, including such groups as first-semester freshmen, first-generation college students, transfer students, and veterans. In turn, the Pathways curriculum will prepare these diverse groups of students to become contributors to the global society in which they will live and work. To support this effort, inclusive pedagogies that foster deep learning in all students will be adopted. Extending this principle, all students will be encouraged to examine issues of diversity and inclusion, such as gender, race, socio-economic status, and sexual orientation. This will be accomplished through the integration of concepts in intercultural and global knowledge across the Pathways curriculum. Note: this principle speaks to how the class is taught (pedagogies, classroom environment, etc.) as much as the what is taught.

Guiding questions: How will this course address the needs and challenges of a variety of students at VA Tech? How will this course offer opportunities to examine issues of diversity and/or be taught in an inclusive way?

Describe how the course fits the Relevance Principle

Relevance

The Pathways curriculum will be relevant to students' personal development, helping them to integrate new learning into their lives for current and long-term application. The curriculum will challenge undergraduates in fundamental areas of learning, which will be relevant to major courses and activities across the undergraduate years and beyond. Students will also develop the skills they will need for success in every area of their lives: communication, problem-solving, critical thinking, ethical behaviors, inquiry, and creativity.

Guiding questions: How will this course offer opportunities for students to make relevant connections of the material to their majors, lives, careers, etc.?

28. Core & Integrated Concepts

**This section will open if Pathways course and specific core concepts will open when checked**

A. Core Concepts

**A. Core Concepts**

Core Concept Attributes

Please select the concept(s) this course will meet. Then click on the concept(s) you need to address to move to that section of the form. A course may be approved for no more than two core concepts. Instructors of the course will be responsible for the assessment of each concept and the student learning outcome checked.

**Critical Thinking Humanities (G02)**

If Critical Thinking in the Humanities (G02) is checked

Critical Thinking in the Humanities 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

Choose a minimum of three of the student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Identify fundamental concepts of the humanities



Guiding prompts: What are some fundamental concepts explored in this course and how do they relate to the humanities? In what ways might an instructor evaluate students on the acquisition of this knowledge?

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



Guiding prompts: Identify some example texts and artifacts students will explore in this course. What are some theories and methods students might use to analyze them? In what ways might an instructor evaluate students on the acquisition of this skill?

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



Guiding prompts: Identify some example texts and artifacts for which students will interpret within the different contexts. In what ways might an instructor evaluate students on the acquisition of this skill?

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



Guiding prompts: Identify examples of the types of sources students will be working with. Outline a potential product students will produce to demonstrate a coherent narrative or argument.

Critique & Prac in Design (G06D)

If Critique and Practice in Design (G06D) is checked

Critique and Practice in Design and the Arts 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. This outcome 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 learning concept, students will study the arts and design thinking in two courses: either 1 design and 1 arts course.

Credit hours: 6 credits--3 design + 3 arts

Course meets:  Arts  Design

Choose a minimum of three of the student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Identify and apply formal elements of design or the arts



Guiding prompts: What are some formal elements of design/arts students will identify and apply? In what ways might an instructor evaluate students on this acquisition?

2. Explain the historical context of design or the arts




Guiding prompts: Identify examples of some historical contexts students will explore. What will an accurate explanation look like? In what ways might an instructor evaluate students on this acquisition?

3. Apply interpretive strategies or methodologies in design or the arts




Guiding prompts: What are some strategies or methodologies students will apply in this course? In what ways might an instructor evaluate students on the acquisition of this skill?

4. Employ skills, tools, and methods of working in design or the arts



Guiding prompts: Identify examples of the types of skills, tools, and methods students will employ. In what ways might an instructor evaluate students on the acquisition of these skills?

5. Produce a fully developed work through iterative processes of design or the arts



Guiding prompts: Outline an example of a fully developed work students could develop in this course. What would a good one look like? In what ways might an instructor evaluate students on the acquisition of this skill?

Critique & Practice in Arts (G06A)

If Critique and Practice in Design in the Arts (G06A) is checked


Critique and Practice in Design and the Arts 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. This outcome 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 learning concept, students will study the arts and design thinking in two courses: either 1 design and 1 arts course.

Credit hours: 6 credits--3 design + 3 arts

Course meets:  Arts  Design

Choose a minimum of three student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Identify and apply formal elements of design or the arts



Guiding prompts: What are some formal elements of design/arts students will identify and apply? In what ways might an instructor evaluate students on this acquisition?

2. Explain the historical context of design or the arts



Guiding prompts: Identify examples of some historical contexts students will explore. What will an accurate explanation look like? In what ways might an instructor evaluate students on this acquisition?

3. Apply interpretive strategies or methodologies in design or the arts



Guiding prompts: What are some strategies or methodologies students will apply in this course? In what ways might an instructor evaluate students on the acquisition of this skill?

4. Employ skills, tools, and methods of working in design or the arts



Guiding prompts: Identify examples of the types of skills, tools, and methods students will employ. In what ways might an instructor evaluate students on the acquisition of these skills?

5. Produce a fully developed work through iterative processes of design or the arts



Guiding prompts: Outline an example of a fully developed work students could develop in this course. What would a good one look like? In what ways might an instructor evaluate students on the acquisition of this skill?

Discourse Advanced (G01A)

If Discourse – Advance (G01A) is checked

Discourse is the 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. In meeting the Discourse LO, 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.

Courses in the Discourse Concept will have to meet ALL student learning outcomes. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

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

1. Discover and comprehend information from a variety of written, oral, and visual sources



Guiding prompts: What are some examples of the types of written, oral, and/or visual sources students will explore in this course? How will students come to comprehend information from these sources? How will you know?

2. Analyze and evaluate the content and intent of information from diverse sources



Guiding prompts: What criteria will students use to evaluate information from diverse sources and how will they determine the intent of the source? In what ways might an instructor evaluate students on the acquisition of this ability?

3. Develop effective content that is appropriate to a specific context, audience, and/or purpose



Guiding prompts: Provide examples of the content students will develop. Describe the context/audience/purpose for which these will be developed. In what ways might an instructor evaluate students on the acquisition of this skill?

4. Exchange ideas effectively with an audience



Guiding prompts: Provide an example of how students will demonstrate this effective idea exchange. In what ways might an instructor evaluate students on the acquisition of this skill?

5. Assess the product/presentation, including feedback from readers or listeners



Guiding prompts: Provide an example of the product/presentation students might produce and assess in this course. In what ways might an instructor evaluate students on the acquisition of this skill?

**Discourse Foundational (G01F)**

If Discourse – Foundational (G01F) is checked

Discourse is the 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. In meeting the Discourse LO, 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.

Courses in the Discourse Concept will have to meet ALL student learning outcomes. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

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

1. Discover and comprehend information from a variety of written, oral, and visual sources





Guiding prompts: What are some examples of the types of written, oral, and/or visual sources students will explore in this course? How will students come to comprehend information from these sources? How will you know?

2. Analyze and evaluate the content and intent of information from diverse sources



Guiding prompts: What criteria will students use to evaluate information from diverse sources and how will they determine the intent of the source? In what ways might an instructor evaluate students on the acquisition of this ability?

3. Develop effective content that is appropriate to a specific context, audience, and/or purpose



Guiding prompts: Provide examples of the content students will develop. Describe the context/audience/purpose for which these will be developed. In what ways might an instructor evaluate students on the acquisition of this skill?

4. Exchange ideas effectively with an audience



Guiding prompts: Provide an example of how students will demonstrate this effective idea exchange. In what ways might an instructor evaluate students on the acquisition of this skill?

5. Assess the product/presentation, including feedback from readers or listeners



Guiding prompts: Provide an example of the product/presentation students might produce and assess in this course. In what ways might an instructor evaluate students on the acquisition of this skill?

Identity & Equity in U.S. (G07)

If Critical Analysis of Identity and Equity in the United States (G07) is checked

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: This concept is worth 3 credits that can be double-counted with another core concept.

Choose a minimum of three student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

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)



Guiding prompts: How might students have the opportunity in the course to analyze how these elements intersect? How might an instructor evaluate student acquisition of this ability?

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



Guiding prompts: How might students have the opportunity in the course to analyze social equity and diversity in the US? How might an instructor evaluate student acquisition of this competency?

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



Guiding prompts: What are some examples of ‘creative works’ that students might explore in this course and how do they help students reimagine diversity in human experience in the US? How might an instructor evaluate student acquisition of this ability?

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)



Guiding prompts: How might students in the course demonstrate how aesthetic and cultural expressions mediate these elements? How might the instructor evaluate performance in this competency?

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



Guiding prompts: How might students in the course analyze this interactive relationship? How might the instructor evaluate student acquisition of this capacity?

**Quant & Comp Thnk Adv. (G05A)**

If Quantitative and Computational Thinking - Advanced (G05A) is checked

Quantitative and Computational Thinking is 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 concept.

Credit hours: 9 credits--6 foundational + 3 advanced/applied

or

Credit hours: 9 credits--3 foundational + 6 advanced/applied

Choose a minimum of four student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Explain the application of computational or quantitative thinking across multiple knowledge domains



Guiding prompts: Identify the knowledge domains across which students will explain the application of computational or quantitative thinking. In what ways might an instructor evaluate students on the acquisition of this skill?

2. Apply the foundational principles of computational or quantitative thinking to frame a question and devise a solution in a particular field of study



Guiding prompts: What are some example questions students might explore in this course? What are some foundational principles students will apply to those questions? In what ways might an instructor evaluate students on the acquisition of this skill?

3. Identify the impacts of computing and information technology on humanity



Guiding prompts: What are some examples of human impact students could explore in this course? In what ways might an instructor evaluate students on the acquisition of this skill?

4. Construct a model based on computational methods to analyze complex or large-scale phenomenon



Guiding prompts: What are some examples of complex phenomena students might explore in this course? How will students go about constructing models to analyze these phenomena? In what ways might an instructor evaluate students on the acquisition of this skill?

5. Draw valid quantitative inferences about situations characterized by inherent uncertainty



Guiding prompts: Identify examples of the types of situations students will explore. What will a valid inference look like? In what ways might an instructor evaluate students on the acquisition of this skill?

6. Evaluate conclusions drawn from or decisions based on quantitative data



Guiding prompts: What are some sample findings students will evaluate? In what ways might an instructor evaluate students on the acquisition of this skill?

**Quant & Comp Think Found. (G05F)**

If Quantitative and Computational Thinking – Foundational (G05F) is checked

Quantitative and Computational Thinking is 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 concept.

Credit hours: 9 credits--6 foundational + 3 advanced/applied

or

Credit hours: 9 credits--3 foundational + 6 advanced/applied

Choose a minimum of four student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Explain the application of computational or quantitative thinking across multiple knowledge domains



Guiding prompts: Identify the knowledge domains across which students will explain the application of computational or quantitative thinking. In what ways might an instructor evaluate students on the acquisition of this skill?

2. Apply the foundational principles of computational or quantitative thinking to frame a question and devise a solution in a particular field of study



Guiding prompts: What are some example questions students might explore in this course? What are some foundational principles students will apply to those questions? In what ways might an instructor evaluate students on the acquisition of this skill?

3. Identify the impacts of computing and information technology on humanity



Guiding prompts: What are some examples of human impact students could explore in this course? In what ways might an instructor evaluate students on the acquisition of this skill?

4. Construct a model based on computational methods to analyze complex or large-scale phenomenon



Guiding prompts: What are some examples of complex phenomena students might explore in this course? How will students go about constructing models to analyze these phenomena? In what ways might an instructor evaluate students on the acquisition of this skill?

5. Draw valid quantitative inferences about situations characterized by inherent uncertainty



Guiding prompts: Identify examples of the types of situations students will explore. What will a valid inference look like? In what ways might an instructor evaluate students on the acquisition of this skill?

6. Evaluate conclusions drawn from or decisions based on quantitative data



Guiding prompts: What are some sample findings students will evaluate? In what ways might an instructor evaluate students on the acquisition of this skill?

Reasoning in Natural Sciences (G04)

If Reasoning in the Natural Sciences (G04) is checked

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)

Choose a minimum of three student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Explain the foundational knowledge of a particular scientific discipline



Guiding prompts: Describe the particular scientific discipline explored in this course. Include a sample of the 'foundational knowledge' students will be required to explain. In what ways might an instructor evaluate students on the acquisition of this skill?

2. Apply principles and techniques of scientific inquiry



Guiding prompts: Include a sample of the principles and techniques of scientific inquiry students will have opportunities to apply. In what ways might an instructor evaluate students on the acquisition of this skill?

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



Guiding prompts: Include some examples of the credibility and use/misuse of scientific information students will have opportunities to evaluate. How will you know the student has met this indicator?

4. Analyze the reciprocal impact of science and society



Guiding prompts: Science impacts society and vice-versa. In what ways will students be able to analyze this relationship? In what ways might an instructor evaluate students on the acquisition of this skill?

Reasoning in Social Sciences (G03)

If Reasoning in the Social Sciences (G03) is checked

Reasoning in the Social Sciences is 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

Choose a minimum of three of the student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

**1. Identify fundamental concepts of the social sciences**



Guiding prompts: What are some fundamental concepts of the social sciences explored in this course? In what ways might an instructor evaluate students on the acquisition of this knowledge?

**2. Analyze human behavior, social institutions and/or patterns of culture using theories and methods of the social sciences**



Guiding prompts: Identify examples of behavior, institutions, or cultural patterns students will explore in this course. What are some theories or methods students will employ to analyze them? In what ways might an instructor evaluate students on the acquisition of this skill?

**3. Identify interconnections among and differences between social institutions, groups, and individuals**



Guiding prompts: Provide an example lesson that would allow students to identify these interconnections and differences. In what ways might an instructor evaluate students on the acquisition of this skill?

**4. Analyze the ways in which values and beliefs relate to human behavior and social relationships**



Guiding prompts: Provide an example lesson that would allow students to identify these interconnections and differences. In what ways might an instructor evaluate students on the acquisition of this skill?

**B. Integrative Concept**

**B. Integrative Concept**

**Integrative Concept Attributes**

Please select either or both of the Integrative Concept, as applicable. Then click on the concept(s) you need to address to move to that section of the form.

**Ethical Reasoning (G10)**

If Ethical Reasoning (G10) is checked

Ethical Reasoning 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.

Choose a minimum of two of the student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

**1. Explain and contrast relevant ethical theories**



Guiding prompts: What are some relevant ethical theories students will explore within the context of the core outcome? In what ways might an instructor evaluate students on the acquisition of this knowledge?

**2. Identify ethical issues in a complex context**



Guiding prompts: What are some ethical issues students might explore that fit within the context of the core outcome? In what ways might an instructor evaluate students on the acquisition of this skill?

3. Articulate and defend positions on ethical issues in a way that is both reasoned and informed by the complexities of those situations



Guiding prompts: How might students have an opportunity in the course to articulate and defend positions on ethical issues? How might the instructor evaluate mastery of this ability?

**Intercultural and Global Awareness (G11)**

If Intercultural and Global Awareness (G11) is checked

Intercultural and Global Awareness 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.

Choose a minimum of two of the student learning outcomes for this core concept. As you complete the descriptions, please use examples, particularly to explain discipline-specific vocabulary.

1. Identify advantages and challenges of diversity and inclusion in communities and organizations



Guiding prompts: In what context will students be asked to identify these advantages and disadvantages? In what ways might an instructor evaluate students on the acquisition of this perspective?

2. Interpret an intercultural experience from both one’s own and another’s worldview



Guiding prompts: What types of intercultural experiences will students evaluate from different perspectives? In what ways might an instructor evaluate students on the acquisition of this ability?

3. Address significant global challenges and opportunities in the natural and human world



Guiding prompts: What are some global challenges and opportunities addressed in this course? In what ways might an instructor evaluate students on the acquisition of this skill?

29. Course Additional Document – Attache File(s)

Additional Documentation	<input type="button" value="Attach File"/>	Uploaded Files:
		<input type="text"/>
		Files To Be Uploaded:
		<input type="text"/>

30. Course Proposal – Cancel \_ Save Changes \_ Admin Save \_ Start Workflow Tabs

<input type="button" value="Cancel"/>	<input type="button" value="Save Changes"/>	<input type="button" value="Admin Save"/>	<input type="button" value="Start Workflow"/>
---------------------------------------	---	---	---

## IV. Pre-/Co-requisite Guidelines:

**Note:** Boxes outlined in **Red** are required fields and must be completed prior to moving proposal forward to Courseleaf workflow.

### 1. Course Request Type Field

## Course Inventory

### New Course Proposal

Course Request Type	Pre/Co Requisite <span style="float: right;">▼</span>
---------------------	---

Select course type, as applicable:

Standard

Pathways

Pre/Co Requisite

#### Notes:

- The following guideline content assumes “Pre/Co Requisite” “Course Request Type” selected.
- When using this Guideline for course revision...
  - Fields will be populated with previously approved content.
  - Edits to this content will be “redlined.”

### 2. Contact Information Fields

#### Contact Information:

Department	<input type="text"/>		
Contact Name	<input type="text"/>		
Contact Phone	<input type="text"/>	Contact E-mail	<input type="text" value="@vt.edu"/>

Provide associated Dept/School contact information for person proposing new or revised course. This is the person who will be reached out to during 15-DR to address proposal comments. However, this person is not associated with workflow if they were not the user to enter the proposal.

### 3. Academic Level Fields

- Academic Level
- AS - Associate
  - GR - Graduate
  - MD - Medicine
  - PR - Professional
  - UG - Undergraduate

## Notes:

Select applicable “Academic Level” for course.

## General Information

### 4. Effective Term Field

Effective Term	<input type="text" value="Select..."/>
----------------	--

Select the first term proposed course Pre/Co Requisite change is requested.

### 5. Course Designator / Number Fields

Course Designator	<input type="text" value="Select..."/>	Course Number	<input type="text"/>
-------------------	--	---------------	----------------------

Select course designator from the pulldown menu.

Select course number

### 6. Sequenced Course Field

Sequenced Course	<input type="text" value="Select..."/>
------------------	--

Select one of the following, as applicable...

- A - Singular Course, Undergraduate
- B - Series, Undergraduate
- C - Connected, Undergraduate
- G - Singular Course, Graduate
- H - Series, Graduate
- I - Connected, Graduate

## Notes:

- Stand-alone course (A or G): Course number must end with the digit “4.”
- Series Course (B or H):
  - Course numbers end with the digits “5 and 6.”
  - Course numbers for multi-semester courses are separated by hyphens (i.e., XXX5 – XXX6).
  - XXX5 courses **must** be taken prior to XXX6 course.
  - In most instances, the XXX5 course is a prerequisite to XXX6 course.
  - One course proposal is submitted in support for approval of both courses in the “Series Course.”
  - Course and ADP titles must be the same for each course in the series.
- Connected Course (i.e., C or I):
  - Course numbers end with the digit “5 and 6.”
  - Course numbers for multi-semester course are separated by a comma (i.e., XXX5, XXX6).
  - Courses are **not** required to be taken in order (i.e., XXX6 may be taken before XXX5).

- One course proposal is submitted in support for approval of both courses in the “Connected Course”.
- Course and ADP titles must be the same for each course in the sequence.

If either B, C, H, or I is selected, the below box will appear. In the “Sequenced Course Number” box, include the course number that is associated with the sequenced, series, or connected course.

Sequenced Course Number

### 7. Sequence Course Picker

Sequenced Courses	Code	Title	
Course Picker			

Sequenced Courses:

- Each course in sequence must end with the digit “4.”
- Supports continuing course content using two separate courses (e.g., ABCD 1234 and ABCD 1244).
- Courses in sequence have different course titles (e.g., HIST 1234 History of Window Glass 1600 – 1900, and HIST 1244 History of Window Glass 1900 – Present), or as often used, the same title with a roman numeral (e.g., HIST 1234 History of Window Glass I and HIST 1244 History of Window Glass II).
- In most instances, the first course in the sequence (e.g., ABCD 1234) is a prerequisite to second course in the sequence (e.g., ABCD 1244).
- A course proposal is required to be submitted for each course in the sequence.

### 8. Department (School) / College Fields

Department

College

Notes:

- Courses may only be offered by Academic Units (i.e., College, Department, or School) approved by SCHEV.
- Academies and Centers are not SCHEV approved Academic Units, and therefore, may not offer courses.

### 9. Instruction Type(s) Selector

Instruction Types

<input type="checkbox"/> L - Lecture	<input type="checkbox"/> B - Lab
<input type="checkbox"/> E - Elective Clerkship	<input type="checkbox"/> K - Clerkship
<input type="checkbox"/> VB - Virtual Campus Lab	<input type="checkbox"/> VL - Virtual Campus Lecture

Select applicable “Institution Types”

10. Course Long Title

Long Title   
 72 characters remaining

Note:

- Course title as printed in University Course Catalog

11. Course Instructional Contact Hours to Credit Hours Fields

Lecture Hours   
 Lab + Lab/Studio

12. Course Prerequisites Fields

Prerequisites

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	<input type="text"/>	<input type="text"/>	▼	▼	▼	✕ ↑ ↓

Description Prerequisites

Note: The "Description Prerequisites" entry box is for prerequisites that are not enforced by banner. For example, "Junior Standing"

In support for using the above "Prerequisite" and "Descriptive Prerequisites" input tools, examples have been provided below:

**Example 1:** "Prerequisite" satisfied by the completion of the two required courses connected using "And" logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	COMM 2024	<input type="text"/>	UG ▼	▼	▼	✕ ↑ ↓
And ▼	▼	MKTG 3504	<input type="text"/>	UG ▼	▼	▼	✕ ↑ ↓

Description Prerequisites

Note: in this example School of Communication will need to request and attach (using tool at the end of this form) letters of support from MKTG.

**Example 2:** "Prerequisite" satisfied by the completion of one of four courses using "Or" logic.



And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	CS 1114		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1574		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	ECE 1004		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	CS 2064		UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: in this example MATH Department will need to request and attach (using the form attachment tool at the end of this form) letters of support from CS and ECE.

**Example 3:** prerequisite satisfied by the completion of a specific course and one of the two courses listed in brackets using both “And” and “Or” logic.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	FREC 2214		UG ▼	▼	▼	✖ ↑ ↓
And ▼	( ▼	MATH 2214		UG ▼	▼	▼	✖ ↑ ↓
Or ▼	▼	MATH 1226		UG ▼	) ▼	▼	✖ ↑ ↓

Description Prerequisites

Note: in this example FREC Department will need to request and attach (using the form attachment tool at the end of this form) letters of support from MATH.

**Example 4:** prerequisite including “Min Grade/Score” restriction.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	ECE 3105	C-	UG ▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Note: When including a minimum grade requirement for a prerequisite course, please include data/information to clearly show the need for that minimum grade is required to be successful in the course. Minimum grade prerequisites are not to be used to limit enrollment in courses.

**Example 5:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓

Description Prerequisites

Pre: Senior Standing

Notes:

- Description Prerequisite - Courseleaf will key on “Pre:” when pulling this enrollment prerequisite requirement into the Course Catalog Description. In this content, “Pre:” must be stated prior to enrollment prerequisite requirement.

- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

**Example 6:** Enrollment prerequisite requirement, but not course prerequisite.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓
Description Prerequisites							
Pre: Pathway Concept Area(s): 3 Reasoning in Social Sciences, 11 Intercultural & Global Aware.							

**Notes:**

- Description Prerequisite - In support of recording this requirement in the Catalog Description, “Pre:” must be stated prior to enrollment prerequisite requirement.
- As an enrollment prerequisite requirement, this requirement cannot be automatically checked by the course enrollment process (i.e., Banner), but must be manually verified to be satisfied by college/department/school staff.

**Additional Guidance Notes:**

- Consider including a description of material taught in the prerequisite course that will contribute to the student success in the course in the academic level justification (step 6).
- A prerequisite does not by itself, justify course level nor is a prerequisite necessary for a subsequent level.
- Permission of instructor is implied and does not need to be listed.
- Do not list prerequisites for prerequisites.
- For Graduate Courses, the default prerequisite is “Pre: Graduate standing.”

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼			▼	▼	▼	✖ ↑ ↓
Description Prerequisites							
Pre: Graduate Standing							

- If a graduate course requires a graduate course as a prerequisite, the “Pre: Graduate standing” is not needed.

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?	
	▼	COMM 5024		GR	▼	▼	✖ ↑ ↓
Description Prerequisites							

- Courses numbered lower than 5000 are not permitted as prerequisites for graduate courses.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as prerequisite requirement:
  - For a course revision, a letter of support is only needed for a prerequisite that has been added as a new requirement as part of that course revision.

### 13. Course Corequisite Fields

Corequisite

Code	Title	
		+

Description Corequisites

Notes:

- The “Corequisite” entry tool may only be used of a single corequisite, or for multiple corequisites using “And” logic statement (Example 1).
- The "Description Corequisites" entry box is for multiple corequisites containing “Or” logic statement (Example 2).

In support for using the above “Corequisite” and “Description Corequisite” input tools, examples have been provided below:

Example 1: Single Corequisite or multiple corequisites connected using “And” logic statement.

Corequisite

Code	Title	
PHYS 1055	Introduction to Astronomy	+
		×

Description Corequisites

Note: Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content.

Example 2: Corequisite that using “Or” logic, or combination of “And” and “Or” logic statement.

Corequisite

Code	Title	
		+

Description Corequisites

Co: PHYS 2325 or MATH 1226

Notes:

- Noting that the above “Corequisite” input tool only supports courses using “And” logic, the “Corequisite” tool may not be used for the requested corequisites using “Or” or mixed (“And” & “Or”) logic.
- “Description Corequisites” - Courseleaf will key on “Co:” when pulling this requirement into the Course Catalog Description. In this content, “Co:” must be stated prior to content provided in this box.

- In this example PHYS Department will need to request and attach (using form attachment tool at the end of this form) letters of support from MATH.

Additional Guidance:

- Course corequisites cannot be automatically checked by the course enrollment process (i.e., Banner) and therefore must be manually verified to be satisfied by college/department/school staff.
- Include letter(s)/e-mail(s) of support (step 27) to use another department’s course(s) as corequisite requirement:
  - For a course revision, a letter of support is only needed for a corequisite that has been added as a new requirement as part of that course revision.

14. Add/Drop Pre/Co Requisite

### Add/Drop Pre/Co Requisite

Notes:

If request is being processed for the upcoming **effective term**:

- Requests to **ADD** prerequisite requirements (i.e. turn enforcement **ON**, add grade restriction, add course) must be processed prior to the opening of "course request" for the applicable effective term.
- Requests to **REMOVE** prerequisite requirements (i.e. turn enforcement **OFF**, remove a grade restriction, drop course) may be completed at any time, unless the removal causes the course to be more restrictive.

15. Enable/Disable Prerequisite enforcement

Enable prerequisite enforcement?  
 Yes  No

Enable prerequisite enforcement?  
 Yes  No

If “Yes” is check, prerequisite enforcement will be turned ON. Implying that Banner will automatically check that prerequisite are met when student enrolls in course section.

Enable prerequisite enforcement?  
 Yes  No

If “No” is check, prerequisite enforcement will be turned OFF. Implying that a manual check by department staff will need to be completed to ensure that each student enrolled in a course section has met the course prerequisite(s).

16. Add support letter for non-department Pre/Co Requisite

Add support letter for Nondepartment Prerequisite/Corequisite Support Letter	<input type="button" value="Attach File"/>	Uploaded Files: <input type="text"/>
		Files To Be Uploaded: <input type="text"/>

Note:

- Attach letter of support to include a non-departmental course as a prerequisite/corequisite.

17. List (Summary) of Prerequisites/Corequisites after change

List Course Prerequisite/Corequisites after change:

18. Justification

Justification (Justify prerequisite/corequisite changes and remaining prerequisites/corequisites after change)

If there is a minimum grade requirement for a prerequisite, please add explanation in the justification section. Minimum grade requirements should not be used to limit course enrollment but should be used to make sure a student is adequately prepared for the course they are going to take.

19. Course Additional Document – Attache File(s)

Additional Documentation	<input type="button" value="Attach File"/>	Uploaded Files: <input type="text"/>
		Files To Be Uploaded: <input type="text"/>

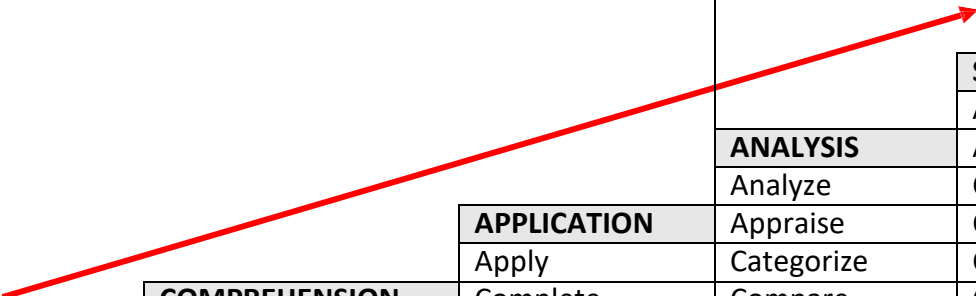
20. Course Proposal – Cancel \_ Save Changes \_ Admin Save \_ Start Workflow Tabs

<input type="button" value="Cancel"/>	<input type="button" value="Save Changes"/>	<input type="button" value="Admin Save"/>	<input type="button" value="Start Workflow"/>
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## Attachment A – Bloom’s Taxonomy of Measurable Verbs

Benjamin Bloom created a taxonomy of measurable verbs to help us describe and classify observable knowledge, skills, attitudes, behaviors and abilities. The theory is based upon the idea that there are levels of observable actions that indicate something is happening in the brain (cognitive activity.) By creating learning objectives using measurable verbs, you indicate explicitly what the student must do in order to demonstrate learning.

Verbs that demonstrate Critical Thinking



					<b>EVALUATION</b>
					Appraise
					<b>SYNTHESIS</b>
					Argue
					Assess
					<b>ANALYSIS</b>
					Assemble
					Choose
					Analyze
					Collect
					Compare
					<b>APPLICATION</b>
					Appraise
					Combine
					Conclude
					Apply
					Categorize
					Comply
					Estimate
					<b>COMPREHENSION</b>
					Complete
					Compare
					Compose
					Evaluate
					Construct
					Contrast
					Construct
					Interpret
<b>KNOWLEDGE</b>	Describe	Demonstrate	Debate	Create	Judge
List	Discuss	Dramatize	Diagram	Design	Justify
Name	Explain	Employ	Differentiate	Devise	Measure
Recall	Express	Illustrate	Distinguish	Formulate	Rate
Record	Identify	Interpret	Examine	Manage	Revise
Relate	Recognize	Operate	Experiment	Organize	Score
Repeat	Restate	Practice	Inspect	Plan	Select
State	Tell	Schedule	Inventory	Prepare	Support
Tell	Translate	Sketch	Question	Propose	Value
Underline		Use	Test	Setup	

## Bloom's Taxonomy Action Verbs

\* Considered lower-level action verbs, consider using higher-level action verb appropriate for academic level, as/if applicable.

Definitions	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
<b>Bloom's Definition</b>	Remember previously learned information.	Demonstrate an understanding of the facts.	Apply knowledge to actual situations.	Break down objects or ideas into simpler parts and find evidence to support generalizations.	Compile component ideas into a new whole or propose alternative solutions.	Make and defend judgments based on internal evidence or external criteria.
<b>Verbs</b>	<ul style="list-style-type: none"> <li>• Arrange</li> <li>• Define*</li> <li>• Describe*</li> <li>• Duplicate</li> <li>• Identify*</li> <li>• Label</li> <li>• List</li> <li>• Match</li> <li>• Memorize*</li> <li>• Name*</li> <li>• Order</li> <li>• Outline</li> <li>• Recognize*</li> <li>• Relate</li> <li>• Recall*</li> <li>• Repeat</li> <li>• Reproduce</li> <li>• Select</li> <li>• State*</li> </ul>	<ul style="list-style-type: none"> <li>• Classify</li> <li>• Convert</li> <li>• Defend</li> <li>• Describe*</li> <li>• Discuss*</li> <li>• Distinguish</li> <li>• Estimate</li> <li>• Explain*</li> <li>• Express*</li> <li>• Extend</li> <li>• Generalized</li> <li>• Give example(s)</li> <li>• Identify*</li> <li>• Indicate*</li> <li>• Infer</li> <li>• Locate</li> <li>• Paraphrase</li> <li>• Predict</li> <li>• Recognize*</li> <li>• Rewrite</li> <li>• Review</li> <li>• Select</li> <li>• Summarize*</li> <li>• Translate</li> </ul>	<ul style="list-style-type: none"> <li>• Apply</li> <li>• Change</li> <li>• Choose</li> <li>• Compute</li> <li>• Demonstrate</li> <li>• Discover</li> <li>• Dramatize</li> <li>• Employ</li> <li>• Illustrate</li> <li>• Interpret</li> <li>• Manipulate</li> <li>• Modify</li> <li>• Operate</li> <li>• Practice</li> <li>• Predict</li> <li>• Prepare</li> <li>• Produce</li> <li>• Relate</li> <li>• Schedule</li> <li>• Show</li> <li>• Sketch</li> <li>• Solve</li> <li>• Use</li> <li>• Write</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze</li> <li>• Appraise</li> <li>• Breakdown</li> <li>• Calculate</li> <li>• Categorize</li> <li>• Compare</li> <li>• Contrast</li> <li>• Criticize</li> <li>• Diagram</li> <li>• Differentiate</li> <li>• Discriminate</li> <li>• Distinguish</li> <li>• Examine</li> <li>• Experiment</li> <li>• Identify*</li> <li>• Illustrate</li> <li>• Infer</li> <li>• Model</li> <li>• Outline</li> <li>• Point out</li> <li>• Question</li> <li>• Relate</li> <li>• Select</li> <li>• Separate</li> <li>• Subdivide</li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange</li> <li>• Assemble</li> <li>• Categorize</li> <li>• Collect</li> <li>• Combine</li> <li>• Comply</li> <li>• Compose</li> <li>• Construct</li> <li>• Create</li> <li>• Design</li> <li>• Develop</li> <li>• Devise</li> <li>• Explain*</li> <li>• Formulate</li> <li>• Generate</li> <li>• Plan</li> <li>• Prepare</li> <li>• Rearrange</li> <li>• Reconstruct</li> <li>• Relate</li> <li>• Reorganize</li> <li>• Revise</li> <li>• Rewrite</li> <li>• Set up</li> <li>• Summarize*</li> <li>• Synthesize</li> <li>• Tell*</li> <li>• Write*</li> </ul>	<ul style="list-style-type: none"> <li>• Appraise</li> <li>• Argue</li> <li>• Assess</li> <li>• Attach</li> <li>• Choose</li> <li>• Compare</li> <li>• Conclude</li> <li>• Contrast</li> <li>• Defend</li> <li>• Describe*</li> <li>• Discriminate</li> <li>• Estimate</li> <li>• Evaluate</li> <li>• Explain*</li> <li>• Judge</li> <li>• Justify</li> <li>• Interpret</li> <li>• Relate</li> <li>• Predict</li> <li>• Rate</li> <li>• Select</li> <li>• Summarize*</li> <li>• Support</li> <li>• Value</li> </ul>

**Watch Out for Verbs that are not Measurable**

In order for an objective to give maximum structure to instruction, it should be free of vague or ambiguous words or phrases. The following lists notoriously ambiguous words or phrases which should be avoided so that the intended outcome is concise and explicit.

WORDS TO AVOID	PHRASES TO AVOID
<ul style="list-style-type: none"><li>• Believe</li><li>• Hear</li><li>• Realize</li><li>• Capacity</li><li>• Intelligence</li><li>• Recognize</li><li>• Comprehend</li><li>• Know</li><li>• See</li><li>• Conceptualize</li><li>• Listen</li><li>• Self-Actualize</li><li>• Memorize</li><li>• Think</li><li>• Experience</li><li>• Perceive</li><li>• Understand</li><li>• Feel</li></ul>	<ul style="list-style-type: none"><li>• Appreciation for</li><li>• Acquainted with</li><li>• Adjusted to</li><li>• Awareness of</li><li>• Capable of</li><li>• Comprehension of</li><li>• Cognizant of</li><li>• Enjoyment of</li><li>• Conscious of</li><li>• Familiar with Interest in</li><li>• Interested in</li><li>• Knowledge of</li><li>• Knowledgeable about</li><li>• Understanding of</li></ul>