**Abstract Structures**

This Way of Thinking focuses on formal and symbolic representations of objects, structures and/or experiences. Through this focus, this Way of Thinking examines such representations and the relationships between them, and explores ways that formal and symbolic models can be applied to a range of more concrete examples and situations. Abstract reasoning by its nature requires unambiguous, systematic, and/or well-defined rules for the creation and manipulations of symbols and relationships.

Students will focus on developing representations (numeric, symbolic, graphical, and otherwise) and rules. These courses will refine students’ manipulation and understanding of those representations and rules appropriate to the subject being studied. As Abstract Structures model objects, structures and relationships, a course would be expected to cultivate students’ abilities to move fluently between these abstract representations/models and the concrete examples (and/or simpler abstractions) they represent. Examples of Abstract Structures include but are not limited to: music theory; symbolization and evaluation of the validity of arguments; analysis and composition of algorithms and computer programs; analysis and development of mathematical models; linguistic analysis; deductive arguments and formal proofs.

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A Way of Thinking course may only carry one Way of Thinking per instructor; team taught courses may have two distinct Ways of Thinking.

Will your course be team-taught? (Yes/ No)

If yes, then please list instructor and list second Way of Thinking (the proposal for the second Way of Thinking must be submitted at the same time):

Application date:

In what term will the course first be taught:

**Basic Course Information**

Department:

Instructor:

Course Number:

Course title (as listed in the official catalog). If a topics course, please list the specific title this request applies to:

Abbreviated title for class schedule (30 characters or less including parenthesis & designation):

Number of credits:

If new course, grading type: (Drop down)

Prerequisites (if any):

MOST RECENT Official course description from the Academic Catalog. If this is a topics course, please list description for this specific topic:

Date Proposal Received: (Auto-filled)

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In the Integrations Curriculum a course can be designated as either:

1. A Way of Thinking, OR
2. CSD: Identity or CSD: Systems, OR
3. Writing Foundations, Writing Explorations, or Writing Integrations, OR
4. Theological Explorations (Theo 1) or Theological Integrations (Theo 2).

Any course carrying one of the above designations may also have one or two engagements, except for Theological Explorations (Theo 1) and Writing Foundations, which cannot carry engagements:

1. Artistic engagement (ARTE)
2. Benedictine engagement (BEN)
3. Experiential engagement (EXP)
4. Global engagement (GLO)

Any course, except Theological Explorations (Theo 1) and Writing Foundations, may also satisfy the Quantitative Reasoning skill requirement.

Way of Thinking courses may also be themed (Thematic Encounter 100/200/300 or Thematic Focus 200/300). Way of Thinking courses are the only courses that can be designated as a Thematic Encounter or a Thematic Focus.

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Please note: the committee understands that some courses may still be in development. Prompts that ask for examples of assignments seek information about the spirit of what students will do, and instructors are not bound to the specific details (e.g. writing prompts) provided.

1. What abstract structures will students explore?
2. How will students be introduced to formal representations or deepen their understanding of these representations?
3. How will students demonstrate fluency in the analysis (e.g., engaging with first principles and development of the representations) of formal representation and their associated abstract models? Provide an example (or examples) of an assignment(s) where students will demonstrate this.
4. Describe the formal, well-defined system(s) which govern the representations in consideration. How will students be introduced to these systems or deepen their understanding of these systems?
5. How will students demonstrate the ability to navigate the structure and rules (e.g. syntactic rules) of the formal systems? Provide an example(s) of an assignment(s) where students perform relevant symbolic manipulation.
6. What concrete applications of the representations/models will students explore?
7. Provide an example(s) of an assignment(s) where students demonstrate the ability to transition between representations/models and applications.

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Will you be applying for a Thematic Encounter or Thematic Focus designation? (Yes/No)

If yes, you will need to fill out a separate application for either the Thematic Encounter (25% of course at 100, 200, or 300 level) or Thematic Focus (100% of course at 200 or 300 level).

Are you applying for an Engagement or Engagements (maximum 2 pending Senate approval of a different policy)? (Y/N)

If yes, you will need to fill out a separate application for all the Engagements that apply (please mark all that apply).

**For new students entering the 2019 – 2020 academic year, the Common Curriculum will apply until they graduate.**

Does your course currently carry any Common Curriculum designations? (Y/N)

If so, please list: (text box)

Will you be applying for any Common Curriculum designations? (Y/N)

If so, please list: (text box)