

Date: Tuesday, March 17, 2015

Place: Pamplin 32

Time: 5:15 p.m.

Chair: Bernice Hausman

Minutes: Rebecca Miller

Attending: Monty Abbas, Robin Allnutt, Gregory Amacher, Susan Anderson, Nahum Arav, Richard Ashley, Joseph Baker, John Barrett, Robert Bush, Daniel Breslau, Virgil Centeno, Benjamin Corl, Rami Dalloul, Felicia Etzkorn, John Ferris, Leon Geyer, Hans Gindlesberger, Rosemary Goss, Ralph Hall, Bernice Hausman, Wat Hopkins, Aki Ishida, Bradley Klein, Chad Lavin, Jenny Lo, Joe Merola, Rebecca Miller, Michael Moehler, Sakiko Okumoto, Megan O'Rourke, Paulo Polanah, Anita Puckett, Wornie Reed, Christine Kaestle (for Tina Savla), Hannah Scherer, Heinrich Schnoedt, Deborah Smith, Jim Spotila, David Tegarden, Dan Thorp, Eric Vance, Bruce Vogelaar, Layne Watson, Jay Wilkins, Philip Young

Guests: Tom Fox, Peter Haskell, John Coggin

Meeting purpose: Regular Faculty Senate meeting

Agenda items: Approval of the agenda

Approval of the minutes from the February 24, 2015 meeting

Brief announcements and introductions of guests

Old business

New business

Faculty Senate President Bernice Hausman called the meeting to order at 5:16 p.m.

Agenda item 1: Approval of the agenda

Motion to approve the agenda was seconded and passed by unanimous decision.

Agenda item 2: Approval of the minutes from the February 24, 2015 meeting

Faculty senators offered minor suggestions for revisions to the minutes. Minutes for the February 24, 2015 meeting were approved as amended by unanimous decision.

Agenda item 3: Brief announcements and introduction of guests

Guests from various departments were introduced. These guests (listed above) were interested in

participating in the Faculty Senate discussion on the Pathways proposal.

Eric Vance announced that the Shared Governance Survey had been sent out on Monday, March 16, and that there had been 435 responses recorded. President Hausman encouraged all senators to send an explanatory note or reminder about the survey to their faculty.

President Hausman also announced that she will be touching base with Donna Young from AAUP in order to see if we could share her PowerPoint from her session with the Faculty Senate. President Hausman indicated that we, as a Senate, will ultimately be developing our own educational materials about shared governance. She will also be sending out links from the AAUP that explain shared governance.

Agenda item 4: Old business

Pathways Proposal

President Hausman announced that this discussion may be the Faculty Senate's final discussion surrounding the Pathways proposal. She then delivered a brief report from the March 2, 2015 University Council meeting, which included the following points:

- The University Council vote on the proposal has been deferred to April 6, 2015
- There has been a meeting organized by the President's staff for March 31 in order to facilitate a compromise agreement on revision of general education. Attendees at the meeting will include the President, the Provost, Rachel Holloway, Marlene Preston (Chair, UCCE), Stephen Martin (Chair, CUSP), Austin Larowe (Undergraduate Representative to the Board of Visitors), and Bernice Hausman

President Hausman has proposed revisions to the current Pathways proposal, which are available in the March 17 Meeting Agenda folder in Scholar. Also in that folder is the revision document from January 23, 2015, for comparison.

President Hausman then led senators in a discussion about the acceptability of the proposed revisions that were discussed by the Faculty Senate cabinet and compiled by President Hausman, based on previous conversations of the Faculty Senate. President Hausman began the discussion by asking senators for their perspectives on the following areas:

- That learning outcomes and indicators in areas of subject matter expertise were appropriate and acceptable,
- Whether other issues, including implementation and credit hours, should be brought to the table as issues to discuss at the March 31, 2015 meeting, and
- If a majority of indicators should be met in most areas for courses to be accepted into general education, or if more flexibility (e.g., "at least two") indicators is appropriate for most areas in order to allow faculty to develop courses that meet other intellectual goals and academic priorities.

Following President Hausman's introduction of these questions, senators began discussing the issue of total number of credit hours required by the Pathways proposal. Senators identified a number of schools, such as Kansas State University and their General Education: K-State 8 program, that include

simpler requirements than the Pathways program. President Hausman responded that she did not address the credit hours issue in the new revision document, since concerns about credit hours had stopped appearing in Faculty Senate discussions in the fall. Further, she indicated that since the Faculty Senate did not send these concerns forward to CUSP, it may be too late to address the credit hours issue. Faculty senators continued to discuss the credit hours issue, and identified the following concerns:

- The increased credit hour requirement could have an impact on accreditation (e.g., Society of Wood Science & Technology)
- Students are concerned that an increasing percentage of their schedule will be dictated to them
- Whether or not current courses specific to majors will be able to meet the Pathways requirements

In order to offer a solution to some of these concerns, it was proposed that the Faculty Senate recommend the following changes to credit hour requirements:

- Critique and Practice in Design and Arts: Require 3 credits, rather than 6
- Discourse: Require 6 credits, rather than 9
- Quantitative and Computational Thinking: Requirement 6 credits, rather than 9

After this discussion, President Hausman focused the Faculty Senate's conversation around identifying specific changes to the learning indicators and integrative outcomes that she included in her revised document. The Faculty Senate made the following changes (identified in bolded blue print) to President Hausman's revision document:

***Faculty Senate recommendations to amend the proposed revision of general education at Virginia Tech.
March 24, 2015***

A. Introductory points:

1. Principles guiding the recommendations:

- *Respect the work already done by many faculty members.*
- *Address only the most pressing problems in order to ensure broad faculty buy-in.*
- *Maintain the existing structure for the curriculum (including credit hours, although see section D of this document for some concerns).*
- *Address concerns with distribution option, not the Pathways minor and alternative Pathways options, which are not the focus of concern.*
- *Address only those aspects of the proposal that the Faculty Senate has already identified as needing attention throughout fall 2014 and winter 2015. These are primarily (a) the problem of integrating ethics and intercultural and global awareness throughout the entire curriculum, and (b) the wording of certain outcomes and indicators.*
- *Drop concerns about implementation as these are administrative in nature and do not deal with the principles of the proposed general education program.*
- *Drop request to include more robust and descriptive rationales for the learning outcomes in the document that passes through governance.*
- *Identify other problems noted by faculty for consideration as implementation progresses.*

2. Specific recommendations address the following concerns:

- *Address objections to the integration of the ethics and intercultural and global awareness LOs across the entire general education curriculum by proposing that students must have one E and*

one IG experience, integrated with courses that meet core LOs, in their general education experience overall.

- *Address faculty desire to see elements of curricular goals from the existing CLE maintained in the new curriculum, where appropriate, both to facilitate the conversion of courses and to respect the existing curricular goals that faculty find valuable.*
- *Ensure that the learning objectives (LOs) and the learning indicators (LIs) in each area match up to (a) correct errors or problems that have crept in during the passage of the document from one group to another, and (b) ensure that courses likely to be developed or revised can meet the proposed learning outcomes and indicators as written.*
- *Address faculty concerns about flexibility in developing courses to meet Pathways requirements by considering changing the number of indicators, in some areas, that need to be met in order for courses to be included in general education.*

3. Structure of the Document:

This recommendation document is structured by including the existing language from the 1.23.2015 revision of general education report from the UCCLC to CUSP first, followed by (in blue print) the concerns of the faculty as expressed through the Faculty Senate and the recommendations of the Faculty Senate to address those concerns.

B. Recommendations re: Integrative Learning Outcomes and Indicators

1. Existing overall description and requirements:

These learning outcomes are integrative in that they are woven throughout the curriculum. The need for students to have knowledge and skills in these areas is crucial to all aspects of their lives. Students will develop the capacity to recognize these concepts as they apply to any discipline, thus helping them to consider and connect various perspectives.

To support this integration, every Pathways course will address at least one of the Integrative Outcomes. This infusion of the Integrative Outcomes into general education will signal the importance of these concepts to students at Virginia Tech, and the concepts will be further highlighted by discussions that already exists in the majors. Pathways Minors will also address both outcomes.

Many existing courses will be immediately ready to meet one of these outcomes. However, given that this aspect of Pathways may require more significant course redesign for some faculty, there will be a two-year phase-in of this requirement. Courses not initially ready to meet one of these outcomes may be provisionally approved for inclusion in general education so that there will be no interruption in availability of necessary courses to students. By 2018, the courses can be permanently approved with information about ways the courses will meet one of the outcomes.

Faculty will be supported in integrating these outcomes into general education courses through a suite of resources including teaching modules and professional development opportunities.

The language of the integrative learning outcomes is based on the standards of the Association of Association Colleges and Universities as shown in the VALUE Rubrics (available: <http://www.aacu.org/value/rubrics>).

Concerns: The Faculty Senate believes that the recommendation that all Pathways courses will integrate either Ethics or Intercultural and Global Awareness is unworkable, given that certain subject matter does not make integration easy and the repetition across the entire curriculum will not lead to improved learning outcomes among students. Also, students transferring in credits would not have to meet this requirement under the existing proposal, which creates

unevenness across the program in terms of expectations of student learning. The Senate believes instead that integration in one course or experience, if the subject matter is foundational and substantial, is a more reasonable goal for these integrative outcomes in the curriculum overall and will ensure that all students meet these outcomes in a more meaningful way.

The Faculty Senate is mindful, however, that members of the UCCLE would very much like to see these outcomes fully integrated. The Faculty Senate thinks that full or at least broader integration might be explored further to consider its feasibility, even as the one experience for each integrative outcome is initially implemented as the curricular requirement. The benefit of this plan is that the implementation of the integrative outcomes does not have to be delayed, as in the existing proposal, while exploration of how to achieve broader integration across the curriculum can be pursued simultaneously with initial implementation of the curriculum overall.

Recommendations: The Integrative Outcomes require one E and one IG experience. For students in the distribution model, this could mean a course, but it could also mean (for example) Study Abroad or an internship. For students in Pathways minors and in the alternative Pathways, these outcomes might be met more variously, for example, in a way that integrates the outcomes more fully across the coursework and experiences of the minor or alternative pathway.

2. Ethical Reasoning is a thought process regarding what is right and wrong in human conduct. 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 will support students in developing strategies for formulating and executing ethical decisions in their professional and personal lives. Courses addressing this outcome must meet a majority of the learning indicators.

Credit hours: This learning outcome will be met in conjunction with Core Outcomes. No extra hours will be necessary.

Indicators of Learning

1. Explain significant ethical theories and which best apply to one's personal beliefs.
2. Identify ethical issues in a complex context.
3. Apply specific ethical perspectives to an issue, identifying the implications of this application.

Concerns: Students need a foundational experience in ethics, to be met with one course or experience that meets the learning outcomes of its own domain as well as the learning outcomes in ethics. In addition, the purpose of ethics education is not only to understand one's own beliefs from an ethical viewpoint, but to learn about ethical positions that challenge one's own beliefs.

Recommendations: That the following set of ethics outcomes and indicators, which amend the UCCLE's proposed outcomes and indicators by using the ethical reasoning description from Harvard University (<http://www.registrar.fas.harvard.edu/courses-exams/courses-instruction/ethical-reasoning>), be adopted. The Senate also recommends that all courses designated as ethics courses in Pathways be required to meet all three indicators, as well as the required number of indicators in their primary domain.

Ethical Reasoning is the principled evaluation of moral and political beliefs and practices. In today's complex and diverse world, ethical understanding requires more than just the desire to do the right thing. Competence in ethical reasoning provides tools that enable students to deliberate and to assess for themselves claims about ethical issues in their personal, public, and professional lives.

All three indicators will be met by Pathways courses with the "E" designation. Students will be required to take one course with an "E" designation, providing foundational knowledge in ethics that can be used and integrated throughout their entire course of study.

Indicators of Learning

- 1. Explain, contrast, and critically evaluate influential ethical theories.*
- 2. Identify ethical issues in a variety of contexts.*
- 3. Articulate and defend positions on ethical issues in a way that is both reasoned and informed by the complexities of those situations.*

*3. **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 outcome must meet a majority of the learning indicators.*

Credit hours: *This learning outcome will be met in conjunction with Core Outcomes. No extra hours will be necessary.*

Indicators of Learning

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

Concerns: *Understanding the challenges of diversity and inclusion is as important as understanding the advantages.*

Recommendation: *The first LI might be revised as follows: "Identify advantages and challenges of diversity and inclusion in communities and organizations."*

C. Recommendations re: Core Learning Outcomes and Indicators

*1. **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 learning indicators would be met in all courses, but expectations for proficiency would be heightened for advanced/applied courses.*

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

Indicators of Learning

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

Concerns: While the Faculty Senate would prefer more language from the existing CLE document about the importance of writing and composing, as well as an indicator which focuses on producing clear writing, it has no recommendation for revision of this LO and its LIs.

2. 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 addressing this outcome must meet a majority of the learning indicators. Only the combination and integration of quantitative and computational courses will serve to meet this learning outcome.

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

Indicators of Learning

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

Concerns: Not all existing courses that currently meet Area 5 CLE requirements will be able to meet a majority of indicators (4) in this domain. For example, 1 and 2 concern applications of these forms of thinking to other domains, and 3 and 4 concern computational thinking and methods. As a result, some existing math and statistics sequences may not meet a majority of indicators without distorting the content of those courses.

Recommendations: Test the idea that 4 indicators must be met for a course to be counted in this domain by looking at the existing courses in the CLE that meet the Area 5 requirement to see if they would qualify. If existing foundational courses in math, statistics, and computer science (as well as other areas, such as philosophy) could meet 2 or 3 indicators rather than 4, consider changing the number of indicators in this outcome that courses have to meet.

3. 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 addressing this outcome must meet a majority of the learning indicators.

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

Indicators of Learning

1. Explain the foundational knowledge of a particular scientific discipline.
2. Apply principles and techniques of scientific inquiry.
3. Evaluate the credibility and the use/misuse of scientific information.
4. Analyze the reciprocal impact of science and society.

Concerns: While concerns have been raised about the LIs in this area each time the Faculty Senate has conferred on the Pathways proposal, no consensus has been reached about the level of specificity that the indicators of learning should articulate. Some senators have expressed a desire to specify the principles in LI 2 (for example, "Apply principles and techniques of scientific inquiry, including i) the self-correcting scientific method, ii) use of data and simulation, iii) evaluation of the credibility and meaning of results and influence of bias, and iv) communication of scientific results."). There was also a discussion about combining LIs 3 and 4 and adding the notion that science is not just about nature but about how people shape the natural world. The new LI might look like this: "Analyze the use and misuse of scientific results, interactions between science and society, and connections between scientific understanding and the world as experienced and shaped by humans."

Recommendations: There is no specific recommendation concerning changes to the indicators in this LO as no consensus was reached. Faculty requested some indication of the discussion concerning this LO be included in this document. One commented: "Despite the simplicity of the learning indicators that emerged from the Pathways group, relevant domain experts on the Faculty Senate could not agree whether they were adequate for improving the CLE or how else to modify them [so that they would be]. We also had clear difficulty in understanding the rationale behind these indicators, including how they map back to the CLE, how they might improve the educational experience, and how they will result in more effective assessment."

4. 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 addressing this outcome must meet a majority of the learning indicators. To meet this learning outcome, students will study the arts and design thinking in two courses: either 1 design and 1 arts course, or 2 integrated courses.

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

Indicators of Learning

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

Concerns: The Faculty Senate does not have concerns with this learning outcome or its learning indicators.

5. 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 outcome 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 addressing this outcome must meet a majority of the learning indicators.

Credit hours: 6 credits

Indicators of Learning

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

Concerns: *The Faculty Senate does not understand why the second sentence in this Learning Outcome is the same as that for Critical Thinking in the Humanities. This outcome is not reflected in any of the indicators listed in this area. In addition, existing LIs do not match up with the language used in the outcome description.*

Recommendations: *The Senate recommends striking the second sentence from the description of the outcomes or adding an LI that addresses it. In LI 1, the Senate recommends that instead of “fundamental concepts” of the social sciences, the words “quantitative and qualitative modes of social science inquiry” be adopted. This would help the LIs match the LO more clearly. In addition, the Senate recommends that “societal institutions” and “patterns of culture” be added to LI 2. These could be added with “and/or” so that no course needs to do all three. The Senate also recommends that courses need to meet 2 LIs to be counted in this domain.*

6. **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 meeting this outcome 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 changed and will be changing over time. Courses addressing this outcome must meet a majority of the learning indicators.

Credit hours: 6 credits

Indicators of Learning

1. Identify fundamental concepts of the humanities, including reading of complex texts.
2. Analyze texts and other created artifacts using theories and methods of the humanities.
3. Interpret texts and other created artifacts within multiple historical, intellectual, and cultural contexts.
4. Synthesize multiple complex sources and create a coherent narrative or argument.

Concerns: *The Faculty Senate does not understand why the second sentence in this Learning Outcome is the same as that for Reasoning in the Social Sciences. This outcome is not reflected in any of the indicators listed in this area. In addition, the Faculty Senate notes that the “reading of complex texts” mentioned in LI 1 is not a concept but a method. The reading of complex texts seems to be implied in the existing LI 2; it could be made more explicit there.*

Recommendations: *The Senate recommends striking the second sentence from the description of the outcomes or adding an LI that addresses it. The Senate also recommends that the first LI be written as follows: “Identify fundamental concepts of the humanities.”*

D. Ongoing Concerns—Increase in Credit Hours

Some Faculty Senators continue to be deeply concerned about the increase in credit hours in general education requirements proposed in Pathways. There are two primary kinds of concern: (1) worry that increased hours in general education limit students' university electives, thereby constricting their capacity to shape a meaningful educational experience throughout all elements of their program of study (major, minor, gen ed, and electives), and (2) worry that for majors with external accreditation and tight requirements, accreditation may be jeopardized with the increase in gen ed credits.

Another concern is the effect on general education itself as some gen ed credits will be fulfilled by courses for the major. Senators thought that departments and programs would be pressed to "game the system" so that departmental major courses would count for gen ed even if they were not really appropriate. Certain programs might put pressure on the faculty committee that will approve Pathways courses in order to make sure that students can graduate in a timely manner and accreditation is not challenged. "Gaming the system" in this way might challenge the academic integrity of certain areas of the curriculum.

The Faculty Senate notes that three areas in the existing CLE have increased hours in the Pathways proposal: Critique and Practice in Design and the Arts (currently Creativity and Aesthetic Experience), Quantitative and Computational Thinking (currently Quantitative and Symbolic Reasoning), and Discourse (currently Writing and Discourse). The Faculty Senate recognizes that significant discussion has gone into the decision to increase general education credit hours, but it has not heard much about the impact of such an increase on student experience.

The Faculty Senate at this time is not recommending a change in the required credit hours to complete general education coursework in the proposal, primarily because it could not reach consensus on this issue. Nevertheless, it is important to note that some senators remain very concerned about it.

The Cabinet will continue to discuss the revisions, and will decide whether or not the revised document should be circulated among our colleagues.

Agenda item 5: New business

No new business was discussed at this meeting, although three items were on the agenda:

- Discussing Commission and Committee reports and issues of topical concern from senators
- Preparing for the Faculty Senate meeting with the Board of Visitors Rector on March 31, 2015
- Discussing meeting issues for the rest of the semester

President Hausman asked senators with Commission or Committee reports to please post these on the forums in the Scholar site. President Hausman also asked senators to be ready to discuss ideas with the Rector of the Board of Visitors at the next Faculty Senate meeting.

Next meeting: Tuesday, March 31, 2015, 5:15 p.m. in Pamplin 32

The meeting was adjourned at 7:10 p.m.