# Interdisciplinary Task Force Report to the Faculty Senate 

Submitted January, 2020


#### Abstract

This report was created in response to a petition brought to the Faculty Senate that raised concerns about the University of Northern lowa's capacity to support collaborative, cross-disciplinary curricula. UNI has a long history of interdisciplinary programs and the University's Academic Master Plan seeks an engaged and integrative learning environment. However, such work has been largely informal, with efforts lacking sufficient structures and resources to sustainably operate or grow.


A Task Force was charged by the Faculty Senate in December, 2018 to

1) evaluate interdisciplinary infrastructure(s) at UNI and
2) research peer institutions' infrastructure and best practices for interdisciplinary work

We were asked to

1) present findings related to current structures, needs, and challenges at UNI,
2) report our research on other institutions' best practices, and
3) propose next steps for the University.

## Executive Summary

This report is submitted in response to those requests. We acknowledge faculty concerns that UNI remain responsive within a dynamic global environment that increasingly demands collaboration, communication, creativity, and problem-solving across traditionally separate academic disciplines. Despite the breadth of interdisciplinary scholarship, this report focused on curricular programs comprised of courses from multiple academic units.

We sought structures and processes that support robust and sustainable interdisciplinary curricula, collaboration, and career preparation that will allow UNI to ensure academic agility within current initiatives to 1) develop and implement a new faculty evaluation system, 2) revise the University's General Education core requirements, 3) implement a newly developed Academic Master Plan and Strategic Plan, and 4) develop a 30-year vision for UNI's future.

Research involved an inventory of UNI programs and a survey of program participants, comparisons with administrative structures at peer institutions and across U.S. universities. Results indicate that UNI program participants lack confidence in the stability of their programs, that UNI lacks the administrative structures that characterize 70\% of our peers, and that we do not maintain any of the mechanisms considered best practices for interdisciplinary program definition, administration, identification, communication or resource allocation.

We recommendation that interdisciplinary best practices be incorporated within current efforts toward faculty evaluation, general education, strategic planning, and academic positioning.

## Scope and Definition of Interdisciplinary Programs

Recognizing the wide range of collaboration recognized by the Academic Master Plan as foundational to UNI's emphasis on applied learning across the curriculum, our first task was to define a reasonable scope for our investigations. As noted in the Academic Master Plan, "intentional collaborations between academic and student affairs, as well as other divisions on campus" are critical to engaged and integrative learning, and "a culture of cross-campus collaboration" allows faculty to engage in research evolve curriculum to maintain relevance within dynamic global and local contexts.

University support for interdisciplinarity can take many forms. We recognize the importance of faculty connections and communications across disciplines to spark interdisciplinary research, learning opportunities, and curriculum. We realize the degree to which extracurricular cooperation allows students to integrate disciplinary knowledge to achieve our overall goals. However, given the initial concern for interdisciplinary infrastructure, we limited our investigation to curricular and administrative structures required to offer an interdisciplinary academic curriculum.

For the purposes of this project, the task force defined "program" as a graduate degree or certificate, or undergraduate major, minor, or certificate that is comprised of courses from multiple departments and/or academic units. We did not address issues of interdisciplinary curriculum content or program design, but limited our attention to administrative and operational concerns of previously developed instructional programs. (Further definitional resources are provided as Appendix A.)

## Task Force Results

The Task Force undertook an internal investigation of interdisciplinary programs currently offered at UNI and external research on administrative issues and best practices of such programs. We then drew several conclusions regarding current structures, needs, and challenges at UNI.

## Internal Research

## Inventory of UNI Programs

UNI currently offers 35 interdisciplinary academic programs: 14 BA or BAS degrees, 8 undergraduate minors, four graduate programs and nine certificates, including one graduate certificate. Total enrollment has risen over the past five years from 212 to 908 . Every program has grown, with the largest increases in the Mental Health minor (+207), the Liberal Studies degree (+74), the Interactive Digital Studies major (+66), and the MBA program (+50). (See Appendix B.)

## Survey of UNI Programs

Given the committee members' wide variety of experiences with interdisciplinary programs at UNI, we conducted a survey of all UNI faculty and staff. We recognized that we needed to hear
the voices of faculty, P\&S staff, Merit staff, and administrators in order to fully understand what works well and what might be improved across very different curricula, learning goals, and program structures.

A voluntary Qualtrics survey was distributed to all UNI faculty and staff identified as working in an interdisciplinary program at UNI. (See Appendix C for complete results.) A total of 101 responses were collected from 22 programs. Respondents were asked to rate how specific elements impacted the program on a Likert scale ranging from 1 (Does not negatively impact program) to 4 (Greatly negatively impacted). The mean scores for specific aspects were as follows:

| Negative Program Aspects (1-4 scale) | N | Mean <br> Response | STD |
| :--- | :--- | :--- | :--- |
| Coordination of the program | 97 | 2.77 | 1.70 |
| Program budget | 97 | 3.81 | 1.30 |
| Lack of secretarial support | 95 | 3.38 | 1.61 |
| Course scheduling | 96 | 3.07 | 1.56 |
| Faculty assignments | 94 | 3.26 | 1.51 |
| Need to explain theoretical justification for program | 96 | 3.01 | 1.70 |
| Negative impact of additional issues <br> Open-ended responses to the source of that negative impact: <br> - advertising <br> - lack of faculty <br> - lack of science content courses offered at a distance for <br> the Science Education MA marketing <br> • support from college dean <br> - unable to populate classes to minimum so skills are not <br> learned | 9.20 | 1.29 |  |

A final portion of the survey asked respondents to rate whether the program is well-coordinated on a Likert scale ranging from 1 (struggles in all areas) to 5 (works well, struggles in few areas).

| Positive Aspects of Program Coordination (1-5 scale) | $\mathbf{N}$ | Mean <br> Response | STD |
| :--- | :--- | :--- | :--- |
| Works well in all areas | 92 | 3.62 | 1.04 |

## Qualitative Results

A qualitative analysis of the results suggest considerable confusion on key aspects of curriculum and administration of interdisciplinary programs. (See Appendix D for complete results.)

- Curricular decisions, in particular, were not understood by respondents to be a faculty responsibility, while course assignments were sometimes thought to be an upper administration decision.
- Meanwhile faculty assignments were consistently found to be the source of program difficulties. Specific problems included too-few faculty to cover the curriculum, faculty assignments that don't reflect all disciplines represented in the program, and too-few faculty assignments to meet student demand for the courses.
- Student advising can be demanding in light of highly customizable programs, an inherently dynamic contemporary curriculum, and diverse student preparation, but faculty advising obligations lie within their home departments.
- Participants overwhelmingly felt interdisciplinary programs were underfunded, although many were unsure of the coordination and funding status.


## Conclusions

Survey results indicate that participating faculty generally find that interdisciplinary program coordination was, overall, somewhat better than neutral, but several administrative elements negatively impact their programs, with budget, secretarial support, and faculty assignments creating the most problems.

- Budgets were overwhelmingly felt to be insufficient, although a lack of transparency regarding the funding process might contribute to the perception.
- Problems with support staff generally involved a lack of staff or faculty to perform necessary tasks rather than any specific issues with staff performance.
- Faculty assignment issues included a lack of faculty to staff the program in line with student demand as well as to perform advising duties.


## External Research

## Peer Institutions Review

The University's peer institutions (as determined by the Office of Institutional Research) were reviewed for interdisciplinary curricula and programming. (See Appendix E for a complete review.) Of the ten universities, five ( $50 \%$ ) advertised interdisciplinary curricula terms of majors, minors, or graduate concentrations or certificates. Seven (70\%) had created an institutional structure to provide guidelines or oversight for interdisciplinary studies, with three (30\%) allowing students to create individualized interdisciplinary programs of study. Three (30\%) sponsored one or more interdisciplinary programs of research, colloquia, or seminar series.

An additional survey of accreditation practices relevant to UNI programs or comprehensive universities more generally was done to locate any issues specifically related to the accreditation of interdisciplinary programs. (See Appendix F for complete results.). An
interdisciplinary program, like any other program being evaluated, must be able to demonstrate that it its educational objectives are consistent with its mission and appropriate in light of the degrees or certificates awarded, successful in achieving stated objectives; and maintains degree and certificate requirements that conform to commonly accepted standards. Faculty qualification, in general, remains within the purview of the home department, regardless of interdisciplinary teaching assignments.

## Best Practices Review

We reviewed the published research on administering and supporting interdisciplinary academic programs at universities similar to UNI in order to gain a broad view of possible structures and administrative policies. (See Appendix G for the complete review.) This review did not address pedagogical or curricular practices, which are under the purview of faculty at most U.S. institutions of higher education, but focused instead on research by and for administrators (e.g. deans, provosts, chief academic officers, and university or college presidents).

The research demonstrated that several interrelated elements that characterize well-performing interdisciplinary programs:

- Clarity of the connection The terminology used to describe programs guides and shapes their assumed purposes, activities, and organizational placement (Klein, 2013), and should clearly indicate how diverse disciplinary knowledge comes together (Augsburg \& Henry, 2009; Casey, 1990). Interdisciplinary programs rarely emerge fully-formed, and the conversations must continue to clarify connections to establish program stability as well as to support ongoing innovation. Further, students navigating across disciplinary areas benefit when clear disciplinary connections guide their transfer of learning across academic boundaries.
- Defined physical and virtual places Effective programs require campus visibility, whether in the sense of dedicated physical space (Holley, 2009a), a more diffuse but recognizable sense of "place" (Klein, 2013), or within a virtual geography of course listings, major codes, web presence, and recruitment materials. Students cannot find a program without such place markers as dedicated course prefixes, consistent messaging boards (physical or media), and programs without a campus presence lack adequate representation in administrative processes.
- Communication specialists Any program benefits from high quality communication, but Branson, et al. (2017) argue for additional emphasis because interdisciplinary work utilizes multiple specialized discourses as well as non-academic communities of practice and external stakeholders. Excellent programs dedicate staff to communication work at both programmatic and curricular levels who assist with clarifying the disciplinary connections, as noted above, as well as liaising with institutional accreditation and assessment processes (Briggle and Christians, 2017) and university administration (Holley, 2009a), and facilitating inclusive practices across disciplines and stakeholder groups.
- Budgetary infrastructure interdisciplinary programs demonstrate "many possible forms of coupling between departments and centers, including appointments, salary lines, distribution of indirect-cost returns, teaching assignments and course-teaching credits,
curricula, and degree-granting" (National Academies, 2005, p 172). They exhibit both horizontal and matrix budgeting, and utilize a variety of contract, MoU, and faculty performance agreements to accomplish the financial allocation process. Across all formats, however, budget allocations are considered separately from resource allocations to discipline-driven departments and colleges.


## Conclusions

As requested by the Faculty Senate, we have identified issues across three categories: the status of UNI's current interdisciplinary structures, structural or process needs relative to peer institutions and best practices, and challenges specific to UNI.

## Current Structures

Interdisciplinary programs at UNI are variously structured and there are no consistent policies or procedures to guide their development, administration, or enrollment. A long history of faculty, staff, and student support for interdisciplinary collaboration has never been formalized at the University level with consistent administrative, curricular, or budgetary policies.

UNI has a long history of teaching and learning across disciplines, with initiatives ranging from the forty-year old graduate program and minor in Sexuality, Women's and Gender Studies to the recently established Certificates in Sustainability and Museum Studies. Efforts also range widely from academic curricula of majors, minors, and certificate programs to student services or administrative units such as the Center for Multicultural Education or the Sustainability Office that foster interdisciplinary collaboration among faculty, staff, students, and community members. The highly organic and largely informal nature of UNI's multifaceted interdisciplinary effort demonstrates an engaged and integrative learning environment, but has required no consistency across time, content, or administrative structure.

Some programs are administered by appointed directors or coordinators, while others are informally staffed and advised by individual faculty members. Some programs receive budget allocations for recruiting, administrative staff, research support, or student services, while others exist with no budget or staff. Some programs are easily identifiable and reached by prospective students; others struggle to communicate offerings or benefits to students, faculty or the community. Some programs boast faculty or staff with interdisciplinary expertise, but others struggle to offer courses or programming due to lack of faculty.

With so little consistency across UNI's interdisciplinary programs, we cannot draw any definitive conclusions about current structures. Instead, we find the lack of university-level structure, policy, or procedure to be the most obvious departure from peer institutions and educational best-practices. A few key structures stand out in their absence: curriculum expectations or guidelines, faculty assignment guidelines, student advising or outcomes assessment procedures, enrollment management or recruiting support, and administrative structures.

## Needs Identified

Beyond the general need for consistent university policies to support interdisciplinary curricula, collaboration, and career preparation, we identified needs in each of the four areas deemed critical best practices in interdisciplinary work.

## Mechanisms for ongoing communication surrounding interdisciplinary scholarship.

Interdisciplinary programs necessarily emerge from collaborations and connections that cross disciplinary lines, which might arise in scholarship, as innovative instructional methods, or as dynamic responses to a changing global community. The best programs remain relevant and responsive as a result of ongoing conversations that establish program stability, support ongoing innovation, and guide student learning. Although some programs systematically engage in such ongoing conversation, the University lacks a mechanism to support the process.

## Consistent methods for identification of interdisciplinary programs.

Interdisciplinary programs are valuable only to those who are able to find them. Best practices include a variety of methods for programs to identify themselves, ranging from bulletin board or website homes to catalog descriptions. A review of peer institutions further illustrates the importance of a centralized directory or description of a university's interdisciplinary initiatives. The wide variety of interdisciplinary programs at UNI might call for multiple types, but the University needs to establish a clear protocol for their identification by students, faculty, and community stakeholders.

## Communication skills and resources.

The boundary-spanning nature of interdisciplinary programs calls for special expertise in the communication of disciplinary connections, communication with multiple stakeholders, and consistent communication within institutional structures. While some programs at UNI might exhibit excellence in this area, the University lacks consistent attention to the communication function as a necessary aspect of administrative policy or resources.

## Budgetary infrastructure.

The task force made no attempt to quantify resources needed for excellent interdisciplinary programs, but we note UNI's lack of attention to budgetary structures as problematic. In some cases, the lack of dedicated budgets results in a program's inability to secure faculty to teach courses, advise students, and maintain instructional outcomes. In other cases, resources are available, but their "organic" ad-hoc structure disallows any sense of program ownership of curriculum, faculty, or administrative processes. Without any University structure or standards for identification or compensation for program administration, there is simply no way to guarantee the critical functions for program sustainability.

## Challenges for UNI

Needless to say, enrollment and budgetary challenges face us all, but ensuring sustainable interdisciplinary programs pose some unique challenges for UNI.

First, the practical, independent, can-do attitude of UNI faculty, which has allowed the development of dynamic interdisciplinary efforts, also resists the creation of administrative policies, structures, and oversight that would foster more sustainable programs. While we recognize a need for consistent administrative support, we also recognize that additional administrative positions, oversight, or policy might be difficult to justify to those not already invested in interdisciplinary scholarship or instruction.

Secondly, the University is presently engaged in significant efforts that demand considerable administrative, staff, and faculty attention. Another initiative, however valuable, might not receive the time and attention it needs from an already overwhelmed University community.

For these reasons, the task force proposes next steps that are integral to enhancing community relevance and student enrollment and framed within the major campus initiatives already under way.

## Recommendations: Proposed next steps

1. Include explicit policies for interdisciplinary administration or participation within UNI's faculty evaluation system. The Task Force recommends policies that recognize and reward multiple faculty roles and create a flexible structure to support diverse interdisciplinary contributions. Not only are present programs highly diverse in their scope, size, and intent, but UNI policies must intentionally foster continuing explorations, dynamic responsiveness to the educational and social environment, and an ever-evolving faculty composition.
2. Provide explicit attention to interdisciplinary aspects of the University's General Education core requirements. While this committee did not consider curriculum and pedagogy to be part of its purview, the importance of interdisciplinary instruction has been part of the ongoing conversation surrounding repositioning, restructuring and revising UNI's General Education requirements. The Task Force recommends explicit attention to interdisciplinary curricula, instruction, and assessment within the General Education Core.
3. Include specific guidelines for interdisciplinary scholarship, curriculum, and student preparation within UNI's Academic Master Plan and Strategic Plan. Given the Academic Master Plan's emphasis on developing a "culture of cross-campus collaboration... that leads to the development of a unique, transdisciplinary community," the Task Force strongly recommends that the UNI Strategic Plan include the development of policies to ensure robust interdisciplinary programs at UNI. Based on our research, such policies must address

- Clearly defined values and organizational goals for interdisciplinary programs at all levels of the University.
- An institutionally consistent process, organizational responsibility, or mechanism by which interdisciplinary programs can organize, interact, and communicate their activities to the University community.
- Standards and mechanisms for identifying and compensating interdisciplinary program coordinators and/or administrative staff.
- Standards and mechanisms for allocating monetary and faculty resources for interdisciplinary programs and scholarship.
- Standards and mechanisms for interdisciplinary curriculum development, enrollment management, and learning and program assessment.
- Standards and mechanisms for advising students participating in interdisciplinary academic programs.
- Standards and mechanisms for consistent communication, connection, and information distribution regarding interdisciplinary programs.

4. Establish a Working Group to participate in the Academic Positioning effort to develop and a 30-year vision for UNI's future. It seems obvious that any repositioning or restructuring at the University, College or Department level must recognize the growing importance of interdisciplinary work in the effective preparation of students. The Task Force recommends the inclusion of a working group to address curricular and structural support for sustained excellence in interdisciplinary work at UNI.

## Task Force Membership

The Task Force membership was selected to provide representation from each of the areas of the Academic Master Plan.

- Chair: Bill Henninger
- Voting Faculty Representatives
- Sustainability Advisory Board: David Grant
- Diversity Faculty Advisory Committee: Gwenne Berry
- Community Engagement Faculty Advisory Board: Julianne Gassman
- WGS Advisory Board: Elizabeth Sutton
- General Ed/LAC Re-Envisioning committee: John Ophus
- Graduate College: Dale Cyphert
(If not otherwise represented above) one representative from
- CHAS: David Grant (above)
- CSBS: Bill Henninger (above)
- COE: Amy Petersen
- CBA: Dale Cyphert (above)
- Non-Voting Representatives:
- Chief Diversity Officer: Gwenne Berry
- Residence Life: Nick Rafanello
- Office of Undergraduate Studies: John Ophus
- WGS Director: Wendy Hoofnagle
- Office of Sustainability Director. Eric O'Brien
- Administrator for Academic Affairs: Bill Henninger


## References and Resources

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# Appendix A: Definitions 

## Definitions \& Examples

Caroline Eckhardt noted that they [interdisciplinary programs] do not fit into the conventional departmental structures and hierarchies, and that they are often seen floating "on the white space of the organizational flowchart" (Eckhardt, 1978, p.2).

## $2 / 6$

These definitions provide perspectives on terms from ASCD's Interdisciplinary Curriculum: Design and Implementation (Alexandria, VA: Association for Supervision and Curriculum Development, 1989) and CAAA's "Briefing Paper of the Council of Arts Accrediting Associations," March, 1994 (Reston, VA: Council of Arts Accrediting Associations).

## Interdisciplinary

- "A knowledge view and curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience" (ASCD, p. 8).
- "An adjective describing the interaction among two or more different disciplines. This interaction may range from simple communication of ideas to the mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, data, and organization of research and education in a fairly large field. An examination of how the ideals of the Enlightenment had influence on and were synthesized in eighteenth-century literature and dance would be interdisciplinary. An interdisciplinary group consists of persons trained in different fields of knowledge (disciplines) with different concepts, methods, data, and terms organized into a common effort on a common problem with continuous communication among the participants" (CAAA, p. 3).


## Crossdisciplinary

- "Viewing one discipline from the perspective of another; for example, the physics of music and the history of math" (ASCD, p. 8).
- "Imposition of the approaches and axioms of one discipline on another. A literature course that analyzed a novel by utilizing the musical structure of exposition, development, and recapitulation would be crossdisciplinary" (CAAA, p. 2).


## Multidisciplinary

- "The juxtaposition of several disciplines focused on one problem with no direct attempt to integrate" (ASCD, p. 8).
- "Juxtaposition of various disciplines, sometimes with no apparent connection between them (for example, music plus mathematics plus history). The distribution of course work in the humanities, social sciences, and sciences found in most undergraduate curricula could be described as multidisciplinary" (CAAA, p. 2).


## Pluridisciplinary

- "The juxtaposition of disciplines assumed to be more or less related; for example, math and physics, French and Latin" (ASCD, p. 8).
- "Juxtaposition of disciplines assumed to be more or less related (for example, mathematics-physics, or French-Latin-Greek = 'classical humanities' in France). A collection of courses satisfying distribution requirements in the humanities would most likely be pluridisciplinary" (CAAA, p. 2).


## Transdisciplinary

- "Beyond the scope of the disciplines; that is, to start with a problem and bring to bear knowledge from the disciplines" (ASCD, p. 8).
- "Establishing a common system of axioms for a set of disciplines. For example, anthropology considered as the science of human beings and their accomplishments'" (CAAA, p. 3).

From Burton, Leon H. "Interdisciplinary Curriculum: Retrospect and Prospect." Music Educators Journal. March 2001, 17-66.

Integrative Studies: "Integrative study in this context refers both to an intellectual and a civic opportunity; it recognizes and articulates relationships among subject matters, and applies learning from one context to another. It also involves building bridges between academic learning and the wider world, between personal experience and public issues. As a civic opportunity, integrative learning relies on connections built between distinct communities. It uses, and contributes to, links between the college campus and business communities, schools, farms, government bodies, churches, arts programs, and community organizations. Integrative learning can take different forms: for example, the integration of methods drawn from different disciplines for study of a single subject; of different kinds of experiences in classrooms, laboratories, studios, internships, or study abroad; or of academic approaches into wider public conversations." - Center for Integrative Studies, St. Olaf College (MN).

Thus, we see many different ways to think about what we want our students to do with a combination of learning experiences, perspectives, and skills. Is what we want found in the simple examination of a single issue across disciplinary lenses (e.g., Power and Gender in Societies) or is it in their integration in order to solve a persistent, "wicked" problem (e.g., climate change)? Is it to go beyond the disciplinary structures and conventions into new territory (e.g., posthumanism) or is it to allow one perspective to view another (e.g., philosophy of science)? Or it simply individualized learning?

## Cases/ Exemplars

Evergreen State (WA): 4-year, Public, Master's Comprehensive, VH Undergrad, pop. 4,000 (small programs, unlike UNI which is larger. Yet, this is one of the exemplars in the U.S.). https://www.evergreen.edu/institutionalresearch/coretheme1
https://www.evergreen.edu/sites/default/files/Theme\ 1\%2C\ 0bj\ 1.pdf (Core Theme 1 Accreditation Metrics).

Meiklejohn Residential College, University of Wisconsin - Madison (theoretical forebear to most ID programs in the U.S.).

## Radford University

https://www.radford.edu/content/chbs/home/interdisciplinary/major.html

## Coastal Carolina University

https://www.coastal.edu/interdisciplinary/
Ferris State University (current UNI peer institution)
http://catalog.ferris.edu/catalog/2018-2019/program/5823

## Touro College (NY)

https://Icw.touro.edu/academics/programs--majors/majors/interdisciplinary-studies.php

Miami University, Ohio
https://miamioh.edu/cca/academics/interdisciplinary-programs/minors/index.html
and http://miamioh.edu/regionals/academics/departments/ics/about/index.html

## Note

Several ranking pages and other data sources point to "Interdisciplinary Studies Programs" at places like Eastern Washington, George Mason, Fitchburg State, etc. though these, like some of those above, are simply personalizable curricula. That is, they are designed to give students a personalizable path toward a degree. This cuts both ways: while it focuses on the student-learner, they often lack the planning and institutional structure of something like an Evergreen College where everyone is in a personalized curriculum.

## Focus Quotes

from Kleinberg, Ethan
(https://www.aacu.org/publications-research/periodicals/interdisciplinary-studies-crossroads)
"focus on dialogue, exchange, and the infusion of new ideas, and accordingly, both rely on the traditional disciplines. In turn, the traditional disciplines are brought into contact with each other not only through the interaction of scholars and students in the interdisciplinary projects but also through the return of these scholars to their "home" disciplines, where they can share these new ideas and approaches. Such exchange occurs when faculty are discussing ideas instead of competing for funding."

## from Casey, Beth

The Dean of Arts and Sciences in a university should work with the Director of General Education to lead consensus from his or her department chairs for interdisciplinary alternative general studies programs. It is a rare faculty who will vote in opposition to programs which demonstrably attract better students to a university.
And yet votes are seldom solicited nor are individual college curriculum committees in Arts and Sciences or in professional colleges consulted. When program directors seek release of faculty, the departments, having never been consulted previously nor having ever participated in the formation of such a program, naturally experience no ownership of the program itself. Thus, often, university programs must pay departments "ransom" fees to release faculty to teach in programs, a sum smaller than the cost of a graduate student replacement.
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Secondly, the faculty development policy in any institution should include instructional development- This will also permit deans and departments to encourage faculty participation on that basis. A Faculty Development Center should be considered where summer institutes for interdisciplinary program development could be based in addition to other kinds of instructional development.
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## She summarizes Maher's findings as

First, since the departmental structures will, in fact, resist building bridges with another discipline, some sustaining administrative mechanism must be in place if programs are to continue. Second, without guidance faculty tend to think of juxtaposing bodies of knowledge rather than of integration and new patterns of thought. Third, most faculty, even though interdisciplinary in their teaching and research, have no opportunity to talk with faculty in other disciplines in which they have an interest, unless a context is provided. Finally, students are not generally given an adequate explanation of what is being attempted in interdisciplinary courses (Maher, 19S4).
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## Overall recommendations from Beth Casey

1. Establish a Central Advisory Board to coordinate the centers and institutes and try to assure that the faculty serving on this board include some of those who hold seats on other significant decision making bodies such as the graduate council or the faculty senate. The Board should oversee the periodic review of these units and evaluate the way in which their individual missions are integrated into the mission of the university.
2. Seek directors for centers and institutes who are able to create visibility and establish purposeful identity for the units, to manage interdisciplinary or multidisciplinary teams, and to integrate their unit into the mission of the institution. Today, a center director is often an entrepreneur with strong grant-getting capacities, a situation which may produce conflict in an institution if it is not handled in an integrated fashion.
3. Review policies on faculty joint appointments with centers and make these sufficiently flexible so that, for example, merit salary may be assigned on a basis equal to the department's even if the salary "pool" is smaller.
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Other Resources
https://sites.google.com/a/ualberta.ca/rick-szostak/research/about-interdisciplinarity
https://www.aacu.org/publications-research/periodicals/interdisciplinary-studies-crossroads

## Appendix B: Interdisciplinary UNI Programs

|  |  |  |  |  | Fall Enrollment |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Program | Prog Type | Program Code | Institutional Home (Where budgeted) | Cat Listing | '14 | '15 | '16 | '17 | '18 | '19 | \# <br> Incr <br> eas e |
| Business <br> Administration | Grad <br> Certificate |  | CBA | CBA |  |  |  |  |  |  |  |
| Business Communication | Minor | 144MIN |  | Marktng \& Comm Studies | 6 | 12 | 12 | 15 | 17 | 27 | 21 |
| Conflict Resolution | Certificate | CRUCER <br> T | CSBS | Social Work | 9 | 16 | 13 | 22 | 14 | 30 | 21 |
| Criminal Justice | BAS. <br> Major | 984BAS | CSBS |  | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Entrepreneurship | Certificate | ENUCER T | Marketing (moving all courses to MKTG) |  | 6 | 9 | 6 | 4 | 4 | 14 | 8 |
| Environmental <br> Resources <br> Management | BA | 97LBA, 97PBA, 97MBA, 97NBA |  |  | 0 | 0 | 0 | 0 | 1 | 7 | 7 |
| Financial \& Real <br> Estate Sales | Certificate | FSUCER <br> T |  | Marketing \& Finance | 0 | 0 | 3 | 0 | 0 | 2 | 2 |
| General Studies | BA Major | GSOPRE, GS1BA, GS2BA, GS3BA, GS4BA, GS4BAP | Distance \& Continuing Education |  | 25 | 20 | 15 | 14 | 17 | 43 | 18 |
| Gerontolgoy | Minor | $\begin{aligned} & \text { 31LBA, } \\ & \text { 31SBA } \end{aligned}$ |  |  | 13 | 8 | 11 | 15 | 15 | 21 | 8 |
| Gerontolgoy | BA Major | 31TMIN | CSBS | SAHS | 23 | 19 | 13 | 16 | 11 | 26 | 3 |
| Global Studies | BA Major | OGSBA | CSBS |  | 10 | 1 | 4 | 3 | 7 | 10 | 0 |
| Humanities | BA Major | 680BA | CHAS |  | 1 | 1 | 2 | 0 | 1 | 1 | 0 |
| Individual Studies | BA Major | 001BA | Distance \& Continuing Education |  | 8 | 4 | 3 | 4 | 5 | 19 | 11 |


| Interactive digital studies | B.A major | 48MBA, 48MPRE |  |  | 14 | 17 | 22 | 23 | 33 | 80 | 66 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interactive digital studies | minor | 48UMIN |  |  | 9 | 22 | 5 | 9 | 11 | 20 | 11 |
| International Business | Minor | 101MIN | CBA |  | 3 | 6 | 2 | 6 | 4 | 17 | 14 |
| International Business, Culture, and Language | Certificate | ICUCER <br> T | CBA | CBA and Lang \& Lit | 6 | 2 | 5 | 2 | 3 | 8 | 2 |
| Leadership Foundations | Certificate |  |  |  |  |  |  |  |  |  | 0 |
| Liberal Studies | BA Major | $\begin{aligned} & \text { 030BLS } \\ & \text { to } 039 \\ & \text { BLS } \end{aligned}$ | Distance \& Continuing Education |  | 9 | 2 | 28 | 63 | 40 | 83 | 74 |
| Managing <br> Business \& Organizations | BAS | - | CBA (not accepting students) | CBA | - | - | - | - | - | - |  |
| Masters of Business Administration | MBA | 157GPR <br> E, 157 <br> MBA | CBA | CBA | 38 | 30 | 18 | 37 | 108 | 88 | 50 |
| Mental Health | Minor | 406MIN | CSBS | Psycholo gy | 0 | 0 | 0 | 34 | 69 | 207 | 207 |
| Museum Studies | Certificate | MSUCER <br> T | no home, no budget | CSBS | 0 | 0 | 0 | 0 | 1 | 5 | 5 |
|  <br> Nonprofit <br> Development | MA (online only) | 01AGPR <br> E, <br> 01AMA | COE | HRCS | 0 | 16 | 1 | 15 | 0 | 18 | 18 |
| Russian and East European Studies | Minor |  |  |  |  |  |  |  |  |  | 0 |
| Science Education | BA Major | $\begin{aligned} & \text { 82ABAT, } \\ & \text { 82ABAT } \\ & \text { P, } \\ & \text { 82JBAT } \end{aligned}$ |  |  | 10 | 5 | 5 | 7 | 6 | 42 | 32 |
| Science Education | MA (online only) | $\begin{aligned} & \text { 827MA, } \\ & \text { 828MA, } \\ & 821 \mathrm{MS} \end{aligned}$ |  |  | 0 | 0 | 0 | 1 | 0 | 35 | 35 |
| Science Education | Minor | $\begin{aligned} & \text { 21BMINT } \\ & \text { 829MINT } \end{aligned}$ |  |  | 2 | 5 | 6 | 4 | 8 | 22 | 20 |
| Sustainability | Certificate | $\begin{aligned} & \text { STGCER } \\ & \text { T, } \\ & \text { STUCER } \\ & \text { T } \end{aligned}$ |  |  | 0 | 9 | 7 | 4 | 7 | 29 | 29 |


| Tactical <br> Emergancy <br> Services with <br> Vulnerable <br> Populations | BAS, <br> Major | - | CSBS |  | - | - | - | - | - |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Technology | BAS, Major | 334BAS | Distance \& Continuing Education |  | 0 | 0 | 0 | 0 | 0 | 11 | 11 |
| Women's and Gender Studies | Certificate | - | CSBS |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Women's and Gender Studies | MA (online only) | 686MA |  |  | 1 | 2 | 1 | 6 | 4 | 12 | 11 |
| Women's and Gender Studies | Minor | 687MIN |  |  | 19 | 6 | 9 | 10 | 14 | 29 | 10 |
| Writing Studies | BA, Major |  | Individual Studies | CHAS |  |  |  |  |  |  | 0 |
|  |  |  |  |  | 212 | 213 | 191 | 314 | 400 | 908 |  |

## Appendix C: Faculty Survey, Quantitative Results

Data for this survey was collected through Qualtrics via a link emailed to faculty and staff identified as working in an interdisciplinary program at UNI. A total of $n=101$ responses were collected. A list of programs that respondents identified being affiliated with can be found below. It should be noted that responses to this survey were voluntary. As a result, conclusions drawn from the data should be made with this understanding in mind.

Respondents were asked to rate how specific aspects of the program negatively impacted the program. Ratings for these program were given on a Likert scale with the following options; 1-Does not negatively impact program 2-Minimally negatively impacts program. 3-Program negatively impacted, 4-Greatly negatively impacted. The mean rating for the specific aspects of the programs were as follows, Coordination of the program $m=2.77$, Program budget $m=3.81$, Lack of secretarial support $m=3.38$, Course scheduling $m=3.07$, Faculty assignments $m=3.26$, Need to explain theoretical justification for program $m=3.01$. A final question asked for additional issues that negatively impact the program. The mean rating for this "other" category was $m=3.2$. Additional issues listed by respondents were; advertising, lack of faculty, lack of science content courses offered at a distance for the MA program (Science Education), marketing, support from college dean, and unable to populate classes to minimum so skills are not learned. Respondents were also asked, "Is the program well-coordinated?" Respondents answered on a Likert scale with 1 = "struggles in all areas" to $5=$ "Work, well struggles in few areas." The mean of the responses for this question was $m=3.615$. Please see Table 1 in Appendix XX for further response information.

Business Administration<br>Business Communication<br>Conflict Resolution<br>Criminal Justice<br>Environmental Resources Management<br>General Studies<br>Gerontology<br>Humanities<br>Individual Studies<br>Interactive Digital Studies<br>International Business, Culture, and<br>Language<br>Liberal Studies<br>Masters of Business Administration<br>Mental Health<br>Museum Studies<br>Philanthropy \& Nonprofit Development<br>Science Education<br>Sustainability<br>Technology<br>Women's and Gender Studies<br>Writing Studies

## Distribution of Responses

| Question | Responses | Mean | STD |
| :--- | :---: | :---: | :---: |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: <br> Coordination of the Program <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 97 | 2.77 | 1.7 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Program <br> Budget <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 97 | 3.8 | 1.3 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Lack of <br> Secretarial Support <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 95 | 3.38 | 1.61 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Course <br> Scheduling <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 96 | 3.07 | 1.56 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Faculty <br> Assignments <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 94 | 3.26 | 1.51 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Need to <br> Explain Theoretical Justification for Program on Campus <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 96 | 3.01 | 1.7 |
| When thinking about this program please indicate how the <br> following challenges negatively impact the program: Other, <br> Please Specify Issue <br> 1-Does not negatively impact program; 4-Greatly negatively <br> impacted | 99 | 3.2 | 1.29 |
| Is the program well-coordinated? <br> 1=struggles in all areas; 5= "works" well (only a few challenges <br> here and there) | 92 | 1.04 |  |

# Appendix D: IDT Fall 2019 Survey Analysis: Qualitative Summary 

Respectfully submitted to the IDT by Wendy Marie Hoofnagle, 11/11/2019

For this program, who makes curricular decisions?
There seems to be considerable confusion and/or inconsistency among the various programs about who makes curricular decisions. For most programs for which there was a response in this category, curriculum is determined by the director or department head and/or the faculty (such as in a curriculum, advisory or steering committee), although Continuing Education seems to be perceived as controlling the curriculum and adjunct hiring for one (General Studies) or there is an overall lack of clarity (for one program, a respondent thought that the Dean of CSBS determines curriculum). For several programs, there was no response at all; this could be either because the respondent(s) were unsure or unwilling to respond.

## For this program, who is in charge of hiring adjuncts?

See Curricular Decisions. For some programs, there are few or no adjuncts hired because specific T/T faculty are assigned to teach courses. Continuing Education seems to be perceived as controlling the adjunct hiring for one (General Studies) or there is an overall lack of clarity (for one program, Humanities, a respondent thought that the "Dean" was in charge of hiring).

Overall, does the interdisciplinary program work?
This question was far and away the one that received the most, and most detailed, responses, which attests to the importance of the concerns that these programs face in the minds of those most closely involved. Of approximately 71 responses, opinions seemed to primarily fall on the side of "yes" (31) or "yes, but with difficulties" (23), whereas some were unsure (10) and only a handful said "no" (7). Of the responses that clarified difficulties with the program, almost all outlined support and staffing issues as the main source of the problems. One major issue (to which I can attest) was suggested by a respondent who pointed out that the program "has an amazing curriculum, but far too few instructors to cover the core courses . . . which is the challenge with interdisciplinary programs. When first proposed, the idea was that other depts would 'chip in' resources for hires. But, all hires for core faculty have had to come through [a department] which has its own hiring demands." This complication was reiterated in another response: "It's extremely popular, which means the students love it and want to have this... minor. In that way it's working. However, because of the popularity, I have wait lists for my class in the Minor up to 15 students per semester. This is not working. Like many things at UNI, it would be solved by hiring more faculty where we have lots of students...." Another respondent answered "Yes--due to outside rather than university funds....however, [the] university hasn't found funds to hire another faculty member." All of these responses suggest even greater difficulties could be anticipated for staffing in the future without more substantial support from the university (financial as well as staffing), even as the programs are becoming increasingly popular among students. This sentiment was echoed in another response: "Yes it 'works' in that it is extremely popular. Students love how customizable it is, how interdisciplinary it is, how marketable it is for them (in terms of job skills) and how up to date it is (for the most part, we could be better). It doesn't work in that the key faculty involved... oversee the program on overload." The attractiveness of the customizability of IDPs was reiterated by another respondent, who qualified it by suggesting that there may be some issues with student preparedness that might complicate the sustainability of some IDPs: "It is a program students may select to customize a degree. Most of the students I work with looking to utilize [this program] look to it when not meeting the requirements of their degree. Often, they do not have higher-level courses from multiple colleges [sic]." Despite all programs facing major staffing and financial challenges, however, they seem to succeed in spite of these difficulties because of the dedication of faculty and staff to the programs, which one respondent summed up well: "From my peripheral perspective, it seems to work surprisingly well considering that the faculty all have appointments in one of the... departments, and have a part-time teaching responsibility in [the program]." On a less positive note, one person
stated that "We face a lot of challenges. It 'works' because of the dedication and care of the faculty involved. However, the current structure is not likely sustainability [sic] and is very inefficient and costly in terms of faculty time."

## Is the program well funded?

Responses here seem to echo or reiterate the concerns expressed in the question above, asking about whether the program works. Of 56 responses, very few gave a clear "yes" (7) and a handful gave a qualified "yes, but the program needs more support" (5); the vast majority said "no" (27), often restating the issues mentioned above, and some were unsure of the state of funding for the program (17).

## What aspects of the program work well and why?

- Students like it/flexibility for the students and their educational needs/career goals; fits well with existing majors
- Innovative, unique, and able to grow/change in response to disciplinary and pedagogical developments
- Job placement rates
- Overall administration and abilities of the coordinator(s)
- Instruction and advising, because they are faculty-led; faculty interest/commitment
-Design of the program/interdisciplinarity/variety and quality of courses, instruction, and focus
- Dedication of faculty and staff, especially in listening to students and meeting their needs
- Collaborative on a macro- (university-wide) and micro-level (faculty, staff, and students); community-building
- Inexpensive, comparatively speaking, because it largely utilizes existing courses and faculty
- Programming and community outreach


## What aspects of the program pose challenges?

- Funding/staffing courses/course sequencing and offerings (especially for found majors/minors and fulfilling upper-level course requirements; finding seats for students outside of home department offerings); meeting high student demand
- Work burden on faculty, coordinators and staff; too few available to do the work needed
- Coordination and communication among offices (Registrar and HR) and systems (SIS and GARP); knowing student "numbers" and who to go to for approvals
- Curricular updates (ownership); consistency across sections of departmentally "owned" courses
- Ownership of SLOs and assessments
- Recruitment and retention
- Communication (between coordinators and faculty; about the program and its expectations)


## Appendix E: Summary of Practices at UNI Peer Institutions

## College of Charleston

## Guidelines for Interdisciplinary Programs

By their very nature, interdisciplinary programs need to meet different criteria from other programs. Here are some guidelines for the development of interdisciplinary programs:

1. All interdisciplinary programs should have a required introductory course, capstone, or experiential-learning course that pulls together the various interdisciplinary threads.
2. Each course in an interdisciplinary program must have at least one-third of its content dedicated to the subject of the program.
3. Students must take courses from at least two disciplines (or two courses that are explicitly multidisciplinary).
4. The catalog should contain a complete list of courses that qualify for the interdisciplinary program.
5. All relevant departments must indicate (via signature of the department chairs), an explicit commitment to deliver the necessary courses.
6. Program directors for interdisciplinary programs should normally receive a stipend and/or course release.
7. All of these guidelines apply to all new and existing interdisciplinary programs. http://currcomm.cofc.edu/guidelines-interdisc/index.php

## Interdisciplinary Initiatives

## LCWA World Affairs Colloquium Series

The World Affairs Colloquium Series puts the School's global impact on center stage. In this Series the School's faculty and advisory board bring to our campus speakers with prominent international experience to address topics of world interest. The speakers, their topics, and the discussions generated between students, faculty, and community are one more way that the School fulfills its mission to be the College's place where disciplines merge, the realities of the world are confronted, and where knowledgeable, engaged citizens of that world come of age.

## World Affairs Signature Series

This new annual series involves faculty from across the entire College, linking a cluster of thematically connected regularly taught and special topics courses to a series of extra-curricular events. The inaugural series, entitled "Global Foodways," will take place in the 2018-19 academic year.
Proposals for each new year's programming will be due early in the spring term of each year, a full 18 months before implementation. Proposals need to list at least four faculty (at least two from LCWA), as well as a list of potential courses (regularly taught and special topics) and extra-curricular programs (at least one per semester).

## Interdisciplinary Research Interest Exchange (IRIE)

Making linkages across programs, departments, and schools helps build a sense of shared intellectual purpose on campus, and LCWA's interdisciplinary initiatives contribute to such linkages. Enabling these connections in the first place is critical, and so we are very glad to be able to announce the launch of the Interdisciplinary Research Interest Exchange (IRIE). IRIE is a user-friendly searchable database where faculty can post their research interests and search for other faculty whose interests might coincide with or complement their own. We will be inviting faculty to visit the site at irie.cougars.int, enter their details, and make valuable intellectual hook-ups.

## Interdisciplinary Research Groups

Since the fall of 2016, LCWA has been supporting up to four Interdisciplinary Research Groups with small grants (\$100/semester) to defray the cost of supplies or refreshments, or to assist in bringing in a speaker. Concomitant with the awarding of funds is the expectation that the group will publicize its meetings and open itself to receive new members. Previous groups funded have been the Charleston Area Mediaevalists, the Aesthetic Work Group, a Spatial Theory research group, and the Public Heath Forum.

## Summer Research Grants

The School of Languages, Cultures, and World Affairs (LCWA) at the College of Charleston has consistently supported the professional development of teaching faculty members. There are several initiatives aimed at furthering the support for teaching faculty professional development in LCWA. More information on each of the specific grants and their applications can be found on the LCWA Faculty Grants page.
https://lcwa.cofc.edu/Centers,\ Initiatives,\ and\ Community\ Interests\ /interdisci plinary-initiatives/index.php

## Eastern Illinois University

Africana Studies Minor
Anthropology Minor
Asian Studies Minor
Broadcast Meteorology Minor
Interdisciplinary Environmental Studies Minor
Environmental Sustainability Minor
Ethics Minor
Film Studies Minor
GIS Minor
Health \& Medical Humanities Minor
Health Communication Major
Health Communication Minor
Latin American Studies Minor
Neuroscience Minor
Pre-Law Minor
Premodern Global Studies Minor
Public Relations Minor

Religious Studies Minor
Rural Studies Minor
Science Teaching B.S.
Social Science Teaching B.A. and B.S.
WGS Minor

Humanities Interdisciplinary Center
Interdisciplinary Center for Global Diversity
Faculty Award for Interdisciplinary Research (FAIR) Grant

## Western Washington University

Fairhaven College of Interdisciplinary Studies
https://fairhaven.wwu.edu/
Fairhaven College is distinguished by:

- Small, seminar-style courses at a public university
- Narrative evaluations instead of grades
- Close advising relationships with faculty
- Opportunities for independent and international study
- $\quad$ Student-designed interdisciplinary degrees


## Upsidedown Degree

The usual route to a BA degree explores general liberal arts coursework in the first two years of college study and "major" specialization in the last two years. In the Upside-Down Program, graduates of certain technical or vocational programs reverse this process; completing much of their major in technical academic work at an accredited Washington state 2-year program, then transferring to Fairhaven College to complete their liberal arts coursework. Students complete Fairhaven College's Core curriculum and enhance the area of their technical degree to complete a Bachelor of Arts degree.

## Interdisciplinary Concentrations

Students who pursue the Interdisciplinary Concentration as their major assemble a faculty committee who support them in articulating sound rationales for their areas of study and advise them in developing a detailed plan of study. Students are assisted in completing the Concentration by faculty and other advisors and by the Concentration Seminar Course (FAIR 303a). At the conclusion of the program, students enroll in an Independent Study Senior Project (FAIR 401a) representing the culmination of their academic work in their Concentration. A Summary and Evaluation written in the Advanced Seminar (FAIR 403a) helps each graduate evaluate their own work and to look toward the future.

## Interdisciplinary Concentration: Law, Diversity and Justice Emphasis (B.A.).

The Law, Diversity \& Justice (LDJ) Concentration is designed for students with a strong interest in law, diversity and access to the legal system for under-served communities. The Law, Diversity and Justice Concentration is open to all Fairhaven students with a passion for social justice. The concentration welcomes students who desire to effect change and who have the
potential to act as leaders and role models in their communities using legal knowledge and processes. The curriculum also emphasizes a critical examination of how issues such as race, class, gender, sexual orientation and disability intersect with the legal system.

## American Cultural Studies

- Explore the formation of identities and societies through issues such as race/ ethnicity, social and cultural theory, social economic class, gender and sexual orientation.
- Concentrate on the Americanization process and American cultural institutions and/or American cultural values.
- Examine and question the concepts of privilege, silence and voice.
- Encourage students to become critical thinkers who will be well prepared to work for social change.
- Cross the disciplines of Social Sciences with Humanities to prepare students for advanced study in law, domestic social services, public service, government service, education or continuing study of Ethnic Studies and other social sciences at the graduate level. Students working within the American Cultural Studies program have multiple options available to them, including ACS majors and minors as well as the TESOL Certification.


## Marshall University

## Marshall Institute for Interdisciplinary Research (MIIR)

MIIR was established in 2008 as Marshall University's key vehicle to advancing regional economic development. Scientists at the institute are developing a focused program of biotechnology research dedicated to producing patentable scientific breakthroughs and creating new businesses based on those discoveries.
MIIR is committed to helping prepare the next generation of entrepreneurial researchers who will contribute to advances in human health and the economic growth of our communities. Institute scientists actively involve investigators at all levels-undergraduate, graduate and postdoctoral-in their research.
Working with the directors of the university's academic programs, the institute's education coordinator facilitates students' access to research opportunities in the MIIR labs.
Economic Impact Goals
The institute will:

- Create new jobs in West Virginia;
- Increase state tax revenues;
- Produce self-generative and self-sustainable economic growth;
- Retain and employ significant numbers of West Virginia college graduates in high-paying positions with benefits;
- Help keep the best and brightest West Virginians in the state;
- Create educational and occupational ladders in entrepreneurial research and business innovation;
- Generate patents from intellectual property developed within the institute/university;
- License intellectual property for commercial business development; and
- Nurture new economic expansion and enterprise.


## University of Massachusetts - Dartmouth

Interdisciplinary Programs (Minor, majors, and MAs)

## Multidisciplinary Program

The Multidisciplinary Studies major may be earned as a B.S. or B.A. degree depending on the design of the program of study.
Students with a GPA of at least 2.5 who wish to pursue in depth a particular topic or area of study not available in an established major may choose the Multidisciplinary Studies (MDS) major. MDS allows students to combine course work in two or three disciplines to create their own major, in consultation with a faculty advisor and the Director of Multidisciplinary Studies. Considerable latitude is allowed in the design of the program of study, and of course work, studios and laboratories from any of the colleges may be included, as long as one of the Core disciplines is in Arts and Sciences. Examples of topics or themes chosen by MDS majors are:

- Communications/Photography
- Environmental Studies
- Society and Aging
- Sociobiology

Multidisciplinary studies is intended as an option for students who have some familiarity with college-level study. Thus it is available only to students who have completed at least one semester of college work, and not to entering freshmen. The major is not immediately available to transfer students, although they may apply after completing 15 credits at UMass Dartmouth. The earlier a program of study is designed, the greater the flexibility in scheduling the required courses. As with most other changes of major, requests from seniors can rarely be accommodated. Students may not double-major with MDS.

## University of Minnesota - Duluth

Interdisciplinary Studies B.A.
Program Type: Major
Degree: Bachelor of Arts
Department: Geography and Philosophy
The B.A. in Interdisciplinary Studies is for students whose educational goals can best be met by integrating courses from several fields of study. This major is unique because it is individually designed; students work with faculty advisers to design their curriculum around a chosen theme. Your program might encompass the natural sciences, social sciences, cultural studies, fine arts, technical and professional fields, or a combination of these.
This major offers two tracks: an Individualized Plan that allows students to choose the emphasis of their major, and a Medical Arts and Sciences Plan that prepares students for health-related careers. Both plans require students to choose the specific focus of their program and craft a curriculum to fit that focus.
Unlike many UMD majors, Interdisciplinary Studies is available only by formal application and approval by the student's faculty advisors and the Interdisciplinary Studies Program Director. Students cannot apply for a change of major until their program has been approved. Proposals
must incorporate at least three different areas of study, including at least 12 credits from within the College of Liberal Arts. Students are welcome to include courses from other UMD colleges. Recent creative and successful program titles have included the following:

- Law \& Society
- Classical Heritage
- Ancient Studies
- Marketing Communications
- Fashion Design, Development \& Expression
- Peace Studies

Students must declare this major before completing 70 credits with a cumulative GPA of 2.50 . Exceptions include returning students, transfer students admitted with 70 or more credits, and active military or veteran students, who may declare the Individualized Plan track of the major before completing 90 credits. Students who have more than 70 completed credits are advised to meet with their advisor or a CLA professional advisor to discuss alternative options.
Ferris State University Integrative Studies, B.S.
Degree Type: Bachelor of Science
College(s): College of Arts and Sciences
The Integrative Studies BS program is a flexible degree program designed for highly motivated, independent students who wish to pursue an interdisciplinary baccalaureate degree in educational areas where Ferris State University has appropriate faculty, facilities, and course work, but for which FSU does not have an existing baccalaureate degree program.

Within the individualized study program, a student could propose a program of study that crosses department or college disciplinary areas in an unconventional manner or creates a new configuration of areas of study. The proposed programs should not duplicate any existing FSU major.

In short, the program allows students to develop competencies from a variety of disciplines that will be well matched with their intended career and/or educational goals.

Admission into the Integrative Studies BS program requires the following:
For transfer students coming from other FSU programs or from other institutions:
Admission to FSU in good standing; cumulative GPA of at least 2.0; initial interview with
Program Coordinator (in person or by phone

## Southern Illinois University - Edwardsville

Interdisciplinary Majors \& Minors

## Majors

We have two interdisciplinary majors in the College of Arts and Sciences
International Studies
Liberal Studies

## Minors

African Studies (See the Video)<br>Asian Studies<br>Black Studies<br>Classical Studies<br>Digital Humanities and Social Sciences<br>European Studies<br>Forensic Sciences<br>IRIS (Interdisciplinary Research and Informatics Scholarship Center)<br>Latin American Studies<br>The University Museum<br>Native American Studies<br>Peace and International Studies<br>Pre-Law<br>Religious Studies<br>Urban Studies<br>Women's Studies

The interdisciplinary minor provides educational opportunities not otherwise available and allows student the flexibility to select courses for their minor from several departments in the College of Arts and Sciences.

## Integrative Studies

MA or MS
Integrative Studies at SIUE
The integrative studies master's program allows you to earn a graduate degree that meets your specific career goals by integrating courses from two or three disciplines. Current students are encouraged to access program resources and updates through the integrative studies Blackboard course.
No similar interdisciplinary programs are offered in the St. Louis metropolitan region. The closest comparable program is more than 75 miles from SIUE.
The following are the approved curricula under the integrative studies graduate program:

- Cultural Heritage and Resources Management (MA,MS)
- Engineering Management (MS)
- GIS Development and Database Administration (MS)
- Marketing Communications (MS)
- Media Management (MS)
- Organizational Design Thinking (MS)
- Sustainability (MA,MS)


## Post-Baccalaureate Certificates

Integrative studies certificate programs provide professional advancement in multiple fields.

- Environmental Management
- Marketing and Public Relations
- Sustainability
- Transportation Engineering and Construction Management


## James Madison University

Interdisciplinary Liberal Studies (IDLS): Required courses in the IdLS core are drawn from JMU's General Education Program. However, IdLS students take more of these courses in history, math, and science to meet teacher subject-area competencies set by the State of Virginia.

## The IDLS Core and Concentration

Inclusive Early Childhood | Elementary Education | Special Education
Core: Students seeking teacher licensure in these three areas complete this core. Courses in the core equip students with subject-area knowledge mandated by the state of Virginia for classroom teachers. Students should track their progress through the core using the most current IECEXELEDISPED checklist found here.
Concentration: In addition, IDLS majors in these three licensure areas choose and complete one concentration area. This concentration provides depth of study in various disciplines and integration of disciplinary knowledge beyond the foundational, core requirements at the 100and 200-level. To satisfy your concentration area, select one of the options below: Each entails seven 300 - to 400 -level courses ( 21 credit hours) in a range of disciplines from an approved list curated by the IDLS office--see the main page of the IDLS website for the most recent list. Option 1: Math, Science, and Technology (M/S/T). Take four courses in math and three in science and technology, or take three in math and four in science and technology. Option 2: Humanities and Social Sciences (H/SS). Choose a humanities and social science "track" (see below) and take six courses in that track, plus the required IDLS 400 capstone. Option 3: Math, Humanities, and Social Sciences (M/H/SS). Choose a humanities and social science track. Take three courses in the humanities and social sciences track and four in math, or take four in the humanities and social sciences track and three in math. The humanities and social sciences courses can include IDLS 400, but it is not required.
Option 4: Science, Technology, Humanities, and Social Sciences (S/T/H/SS). Choose a humanities and social science track. Take three courses in the humanities and social sciences track and four in science and technology, or take four in the humanities and social sciences track and three in science and technology. The humanities and social sciences courses can include IDLS 400, but it is not required.
About "tracks": If your concentration option includes courses in the Humanities and Social Sciences, you will also need to select a "track." A "track" is essentially a theme to promote coherence among the upper-level coursework you complete in different disciplines. Select a track at the same time you choose your concentration on MyMadison:

- Tr1: Citizenship and Public Policy
- Tr2: Race, Ethnicity, Gender, and Class
- Tr3: Culture in a Geographic Context--the Americas
- Tr4: Culture in a Geographic Context--Europe
- Tr5: Culture in a Geographic Context--Africa, Asia, the Middle East
- Tr6: Ethics, Values, and Spirituality
- Tr7 (SPED only): Family, Community, and Institutions


## Middle Education

Core: IDLS majors seeking teacher licensure in Middle Grades complete this core; please use the most current MIED checklist found here. Courses in the core equip students with subject area knowledge for classroom teachers as prescribed by the state of Virginia.
Concentrations: In addition, students choose and complete two concentrations in any of these four content areas: Math, Science, Language Arts, and Social Sciences. Courses in these areas provide depth of study in various disciplines and integration of disciplinary knowledge beyond the foundational, core requirements. They also meet subject area competencies mandated by the State of Virginia.
Concentration in Science (18 credits)
Concentration in Math (18 credits)
Concentration in Language Arts (21 credits)
Concentration in Social Science ( 21 credits)

## Truman State

## Design Your Own Major

Do you feel like no one major fits you? Are you having trouble deciding between two majors and a handful of minors? At Truman you can work closely with faculty mentors to design an Interdisciplinary Studies major, a unique individualized academic program that's responsive to your personal interests and professional plans. Curious about what kinds of majors Truman students have designed? Explore the paths other students have pursued.
You can pursue a Bachelor of Arts or a Bachelor of Science in Interdisciplinary Studies. The best way to decide if designing your own major is the right choice for you is to enroll in Introduction to Interdisciplinary Studies (IDSM 175) early in your Truman career. Interdisciplinary Minors
Rapid changes in American and world cultures have created a growing demand for people who can apply their insights to a variety of intellectual and practical challenges. When you combine the context and knowledge from several disciplines, it helps you pursue practical problems more holistically. For example, an Environmental Studies Minor requires the insights of biology, business, health, agricultural science and other areas of study. Understanding Forensic Science requires knowledge of justice systems, chemistry and other disciplines. Diversify your professional potential by adding one of our interdisciplinary minors to any major.
African/African American Studies»
Asian Studies»
Celtic Studies»
Child Studies»
Classical Studies»
Cognitive Science»
Disability Studies»

## Environmental Studies»

Film Studies»
Folklore»
Foreign Language Teacher Prep»
Forensic Science»
International Studies»
Mathematical Biology»
Medieval Studies»
Museum Studies»
Women \& Gender Studies»

# Appendix F: Accreditation Practices 

US Department of Education<br>https://www2.ed.gov/admins/finaid/accred/accreditation.html

Accreditation bodies must be approved by the US Dept of Education in order for their accreditation to qualify the institution for federal programs (e.g. loan guarantees, grants). Accreditation standards must be approved, and faculty qualification, administrative and fiscal capacity, and measures of program length and objectives must be included as elements of the standards.

There is no language specific to academic disciplines, but any "program" being evaluated must be able to demonstrate that it "(1) Maintains clearly specified educational objectives that are consistent with its mission and appropriate in light of the degrees or certificates awarded; (2) Is successful in achieving its stated objectives; and (3) Maintains degree and certificate requirements that at least conform to commonly accepted standards"

## Higher Learning Commission https://www.ius.edu/accreditation/files/hlc-determining-qualified-faculty-guidelines.pdf

Criterion Three: Teaching and learning: Quality, Resources, and Support typically determined by academic preparation such that faculty have "...completed a program of study in the discipline or [academic] subfield...." "but other factors may be considered....Because of changing academic, societal, and workforce needs, institutions are developing interdisciplinary and other non-traditional programs that require faculty to think beyond their own disciplines and traditional academic programs to determine what students should know and to design curricula accordingly."

## Academic Senate for California Community Colleges https://asccc.org/content/understanding-interdisciplinary-studies

The minimum qualifications listed for Interdisciplinary Studies
Master's in the Interdisciplinary area
OR
Master's in one of the disciplines included in the interdisciplinary area and upper division or graduate course work in at least one other constituent discipline(s).

The existence of this designation satisfies the need to require more specialized minimum qualifications than that of a single discipline or cross-listing of courses. Both hiring and curriculum committees are tasked to name the disciplines that contain the knowledge and skills necessary for the faculty member to be as effective as possible. Considering which appropriate
disciplines to include for a given position or course requires input from the authors of the course, faculty and administrative leaders of affected programs, counselors, articulations officers, and others.

For example, a curriculum committee has approved a new course in American Perspectives and has named it interdisciplinary. After discussing the course content, it is determined that the interdisciplinary areas for this course include history, political science, philosophy, and anthropology. Qualified faculty will have a master's degree in one of the disciplines listed and upper division or graduate level course work in at least one of the other listed disciplines. For example, someone with a master's degree in anthropology with upper division coursework in history could be hired to teach the course. Note that the minimum qualifications do not stipulate a number of units or courses that satisfy the upper division or graduate course work requirement.

## AACSB <br> https://www.aacsb.edu/-/media/aacsb/docs/accreditation/business/standards-and-tables/2018-b usiness-standards.ashx?la=en\&hash=B9AF18F3FA0DF19B352B605CBCE17959E32445D9

Interdisciplinary courses, majors, concentrations, and areas of emphasis are specifically included in an AACSB accreditation review. Programs outside the college but with business content may be exempted from review so long as they are not marketed or represented as business programs or associated with the accredited program.

Non-business faculty in an interdisciplinary program need not be included as faculty for accreditation purposes (i.e. counted in qualification, impact, participation percentages).

Interdisciplinary business faculty impact (e.g. publications outside the discipline) are specifically included as acceptable performance, but must be shown to align with the institutional mission.

Connection with other disciplines is considered a critical success factor, and "Business schools should seize opportunities to reinforce and expand the models and incentives that support interdisciplinary research and the structures to facilitate interdisciplinary learning."

## Medical Education Examples <br> https://guides.lib.unc.edu/interprofessional/home http://www.iaomc.org/lcme.htm

The value of interdisciplinary education in nursing, medical, and allied health fields seems to be well accepted, although faculty accreditation remains with each instructor's "home" discipline. In most cases, those standards see interdisciplinary collaboration as a positive characteristic. These degrees might be explicitly required to include interdisciplinary elements, but these are not programs separate from the distinct medical specialties.

## https://caa.asha.org/wp-content/uploads/Accreditation-Standards-for-Graduate-Programs.pdf

Within a specific program (here, audiology/speech language pathology) the academic qualifications for program director must be earned in one of several specific disciplines, but faculty preparation can be more broadly judged as appropriate.

## Appendix G: Best Practices in Interdisciplinary Structures and Practices

This section summarizes published research on administering and supporting interdisciplinary academic programs. This does not look at pedagogical or curricular practices, which are under the purview of faculty at most U.S. institutions of higher education. It focuses research by and for administrators such as deans, provosts, chief academic officers, and university or college presidents.

The research here is not comprehensive. While it does look at research from universities with a high research Carnegie classification, it is prepared with an eye toward the University of Northern Iowa, a medium sized university with a Carnegie classification of Master's Colleges and Universities: Larger Programs. It is acknowledged that Carnegie-designated high and very high research universities contribute to the state of knowledge about administering interdisciplinary programs, it is also acknowledged that the complexity, diversity, and resource base of such institutions are typically very different from institutions that are smaller, more regionally homogenous, and supported by fewer research dollars.

This summary recommends no specific plan or course of action, but serves to guide the thinking of the Provost's Interdisciplinary Task Force, the administration, and faculty leaders of the University of Northern lowa. Terminology is key because of a variety of terms in use, each with a slightly different meaning. For purposes of this report, interdisciplinary simply means two or more recognized disciplinary specialties whose perspectives, insights, and/or methods combine to address an issue or area of study. That is, the term relies on a combination that cannot otherwise be realized separately, even if that is in tandem or parallel.

## Summary

Reviewing the academic and professional literature on interdisciplinary programs, we found several, interrelated key areas that characterize well-performing academic programs:

1. Clarity of the connection: How are different disciplines brought together? Inter- or trans- or cross- or something else? What is the purpose: teaching, research, or service?
2. Need for physical and virtual places: Are there dedicated offices, prominent web presence, advising scripts, and/or larger campus center? Are there bulletin board sites to advertise courses and programs?
3. Communication Specialists: How do programs talk with one another as well as to internal and external stakeholders (upper administration, accrediting, grants and partnerships, etc.)? How do documents reinforce the central critical questions rather than the drive for mastery of material? This will be mirrored in student communication outcomes and habits.
4. Budgetary Infrastructure: How are budgets set up to cross traditional hierarchies and divisions? Who has ultimate fiscal responsibility for the different needs of interdisciplinary programs? Are faculty lines, lab space, and promotion and tenure decisions shared or housed in a single program?

For example, effective programs often use horizontal or matrix budgeting to acknowledge how the workload and material to support an interdisciplinary program is distributed among its members. We expect questions for future action will need to probe more specifically:

1. larity of the connection: How might different disciplines be brought together at UNI?? What is the purpose: teaching, research, or service?
2. Need for physical and virtual places: Where are there dedicated offices, prominent web presence, advising scripts, and/or larger campus center? Are there bulletin board sites to advertise courses and programs? What can we do to facilitate better access/communication
3. Communication Specialists: Do programs talk with one another and with internal and external stakeholders (upper administration, accrediting, grants and partnerships, etc.)? How? How to make more effective? Do documents reinforce the central critical questions rather than the drive for mastery of material?
4. Budgetary Infrastructure: Are/can budgets be set up to cross traditional hierarchies and divisions? Who has ultimate fiscal responsibility for the different needs of interdisciplinary programs? Are faculty lines, lab space, and promotion and tenure decisions shared or housed in a single program?

## Report on Best Practices in Interdisciplinary Programs

It has long been noted that interdisciplinary programs do not fit into the conventional departmental structures and hierarchies, and that they are often seen floating "on the white space of the organizational flowchart" (Eckhardt, p.2). Because our task proceeds from the same observation at our local institution, we wanted to understand the history of such programs within academic organizations of higher learning.

## Clarity of Connection

We first noted that "interdisciplinary" needed to be distinguished from a variety of other terms: multidisciplinary, cross disciplinary, transdisciplinary, and integrative studies. Recognizing possible configurations of different programs through organizing terms was therefore important because UNI already has programs that might fit some definitions but not others (e.g., Individualized Studies, Community Engagement). Yet, research continually stresses what Klein (2017) calls "boundary work," or the relational definition and regulation between two or more spaces of practice. Such spaces are distinct from the places of practice, or the specific and more material institutional contexts. Spaces must be defined and maintained among wider organizations such as universities, research centers, funding agencies, professional conferences, etc. Both Science and Technology Studies (STS) and Writing Studies are two examples of interdisciplinary spaces. One best practice, then, is clarity on terminology because those terms guide and shape assumed purposes, activities, and organizational placement [what Klein calls "harnessing related energies to spatialize new practices" (2013)]. As Augsburg and Henry (2009) affirm, interdisciplinary courses must not be neither too generalized nor too specific; their teaching and oversight must be grounded in the knowledge of disciplinary experts. How these experts from different fields come together makes all the difference. Both UNI and other cases attest to the fact that administrative support is necessary but not sufficient for interdisciplinary work. All stakeholders must be clear as to the program's purposes and desired outcomes, both of which rest on this point.

Casey (1990) noted that administration of interdisciplinary programs noted the need to "Develop interdisciplinary curricula in a manner that will restore praxis to learning and bridge the gaps between theory and practice" (88). In other words, pedagogical and methodological differences must be clarified and accounted for in addition to and in the context of the connection between fields or programs. This is an ongoing, rather than static, concern as fields and knowledge change and adapt to advances and as programs develop their own understandings of what has brought them together, what students gain through their programs, and what role or roles they play in both the institution and the wider public. Such connections and how instruction is responsive to them needs coordination between stakeholders. As Weld and Trainer (2007) found, "equipped with appropriate pedagogical and technological tools, every professor can orchestrate classes of cross-functional teams empowered to explore the interconnections that help achieve what the Boyer Commission's report, Reinventing Undergraduate Education (1998), considers part of a student's Bill of Rights" (158). Furthermore, students need to navigate and make sense of competing discourses, be they across disciplinary areas or across program development. Clarity of connection, then, can help programs identify and manage student transfer of learning which leads to clear learning outcomes, pedagogical strategies, and program sustainability. Indeed, much research in the form of case studies affirms how interdisciplinary programs rarely emerge fully-formed, require ongoing innovation, but must also establish some sense of stability. All of these rest on the exigency of the collaborative endeavor and how collaboration forms around a common purpose so that program faculty can assess and productively make changes that improve the outcomes they hold in common.

## Physical and Virtual Places

Clarity of connection is affirmed by the 2009 ASHE Report on Interdisciplinary Education which, among other curricular items noted that programs also required "dedicated organizational and physical space," what Klein would call "place." While space may be more abstract, interdisciplinary work needs to be sited in particular places, be that the brick and mortar geography of a campus or the virtual geography of course listings, major codes, web presence, and recruitment material. Implied in this are budgetary and administrative concerns, as researchers like Diana Archibald from the University of Massachusetts - Lowell make clear (in Augsburg and Henry 2009). Her research found that "time, funding, and infrastructure" were "top concerns" of interdisciplinary program administrators. The specifics varied on how these concerns manifested themselves, but included lack of a dedicated course prefix, inability to adequately monitor cross-listed courses, inadequate representation at administrative meetings, and even lacking a bulletin board or other advertising space to reach students. Her colleagues proposed the creation of a "hub" for the programs, the "Hub for Interdisciplinary and Integrative Activity" that would "coordinate, connect, and enable interdisciplinary and integrative research, teaching, and service through 1) Resource Management, 2) Programming, and 3) Assessment and Progress Monitoring" (207). This hub connected not just faculty to each other, but also "faculty, students, staff, the community, the corporate sphere, and potential funders" (207). US-Santa Cruz used place rather than curriculum as an organizational means toward interdisciplinary learning by forming several interdisciplinary colleges, each functioning like its own thematic residential college. This allows students access to or routes toward advising and other offices to answer their questions.

Designating places for interdisciplinary work may take many forms. Generally, as Vengroff and Léger (2009) point out, research intensive institutions create a "separate organizational structure, usually a center or institute, dedicated to interdisciplinary research and to a lesser extent teaching" (6) while learning-centered universities often operate with a "culture of adhocracy" (6). In such instances, interdisciplinary work is sometimes already being done without explicit mention. But the fact remains that to foster and cultivate explicit interdisciplinary endeavors, they must be given place. As the survey results from UNI suggest, this has not happened in any regular fashion, leaving students and faculty alike wondering where to turn. Such places are not simply administrative offices, but also learning places for both students and faculty. Science labs, computer labs, and academic support places are often recognized as needed places for interdisciplinary teaching and learning while Teaching and Learning Centers are often recognized as places for professional development. However, the specific places for interdisciplinary work do not stop there. Multiple reports (Feller 2002, Vengroff and Léger 2009) mention clarity about the places for promotion and tenure, support of faculty lines, and

## Communication

Implied in the physical arrangements of interdisciplinary programs is the need for regularized high-quality communication. This goes beyond simple information exchange, as Branson, et al. (2017) argue. Their findings "show the need for enhanced expertise in writing assessment as well as for sustained partnerships among diverse institutional stakeholders so that public programming-from events linked to classroom-level learning to broader cross-unit mandates like accreditation-can yield more rigorous, responsive, and mixed-method assessments" (287). Because interdisciplinary work may utilize multiple specialized discourses and/or rely upon non-specialized publics and external stakeholders to work well, a related best practice is a dedicated person or team to support communication work at the programmatic and curricular levels. This entails a knowledgeable person who can assist in clarifying cross-discourse terms, goals, and purposes; can assist in translating those agreed upon terms, goals, and purposes to stakeholders; and who can report these and other developments out to accrediting and accountability structures.

Attention to communication is also part of the ongoing formative processes of well-functioning interdisciplinary programs because, as Briggle and Christians (2017) point out, communication is the medium through which collaboration and ongoing change happen. As such, communicative work is multifaceted, dynamic, both outward and inward facing, and at the nexus of the ongoing programmatic purposes. For example, Beth Casey (1990) noted the need for administration to "Emphasize faculty development and plan pedagogical strategies to implement interdisciplinary studies" while at the same time "Organize non-hierarchical administrative structures which provide flexibility and adaptability for both faculty and administrators" (88). This shows both the related inward and outward facing needs of interdisciplinary communication and implies how each is formative of the specific enterprise. Related, both UNI and Karri Holley (in Augsburg and Henry) show the need for regular inclusion of interdisciplinary leaders in administrative meetings and consultations, alongside department heads and deans. This allows interdisciplinary programs to adapt within local conditions in a forward-facing manner rather than belatedly after the fact of decision-making.

Lastly, communication relates to the ongoing work of diversity. Communication among different disciplinary experts is requisite to articulate student outcomes and this often extends to outside stakeholders such as employers, internships, funding agencies, and alumni. Because programmatic change is a given, deliberate consideration of multiple voices and perspectives must be had. Hegemonic decision-making and sidelining dissenters promotes poor decision-making and mistrust. Research points out the need for deliberate listening to multiple voices, stakeholders, and perspectives.

## Budgets

Special attention should be paid to budgets with respect to best practices for administrators. Because these tend to be very hierarchical, interdisciplinary programs can be lost in the shuffle among competing departments or, especially, colleges where budgetary allocation decisions are divided among leaders. A 2005 National Academies report noted how "There are many possible forms of coupling between departments and centers, including appointments, salary lines, distribution of indirect-cost returns, teaching assignments and course-teaching credits, curricula, and degree-granting" (172). They discuss both horizontal and matrix budgeting as means to accomplish their recommendation that "Allocations of resources from high-level administration to interdisciplinary units, to further their formation and continued operation, should be considered in addition to resource allocations of discipline-driven departments and colleges. Such allocations should be driven by the inherent intellectual values of the research and by the promise of IDR in addressing urgent societal problems" (185).

Less formally, several documents may help individuals remain visible in budgetary decision-making and performance across multiple areas. Memoranda of Understanding, Faculty Performance Agreements, and other documents were mentioned as means to clarify lines of responsibility and evaluation procedures alongside regular, departmental committees. Vengroff and Léger (2009) recounted how Kennesaw State University used performance agreements to include departmental chairs and tenure evaluation mechanisms in the management of interdisciplinary faculty. This retains faculty contact with already established departments while also providing flexibility and responsibility for extra-departmental work.

