

## Task Force on College Realignment

### Accepted recommendations:

- Since the task force found no significant cost savings in realigning the Colleges of Science and Mathematics and College of Engineering, those colleges will remain separate administrative units.
- The committee also recommended an analysis of shared services for budget, IT and HR and support for student advising. Those recommendations will be pursued by the Deans in each college.

# Final Report of the Task Force on College Realignment

The Task Force on College Realignment was convened in August 2016 to study the feasibility and cost savings of merging the administrative functions in the Dean's Offices of the College of Science and Mathematics (CSM) and the College of Engineering (CoE). If combined, the new college would be the largest college at NDSU with 15 academic departments, 4200 students, and approximately 220 faculty. As directed by the Provost, the committee was charged to (1) examine the resources currently supporting each Dean's Office; (2) consider functions that are unique or duplicated in the two offices, which may be more effectively managed by a different organizational structure; and (3) examine the potentials and concerns that may arise from a merger among students, faculty, and staff.

The committee consisted of the following members:

Alan Kallmeyer, Mechanical Engineering (Committee Chair)  
Dogan Comez, Mathematics  
Greg Cook, Chemistry and Biochemistry  
Dan Ewert, Electrical and Computer Engineering  
Kalpana Katti, Civil and Environmental Engineering  
Dean Steele, Agricultural and Biosystems Engineering  
Wendy Troop-Gordon, Psychology

The committee met regularly throughout the fall 2016 semester, gathering and analyzing relevant information from various sources. This process included an examination of other universities with similar combined college structures; an analysis of current financial resources and staffing levels in the two Dean's Offices; and solicitation of opinions from faculty, staff, students, and administrators in the two colleges as well as the NDSU Foundation. Summaries of the information collected and recommendations regarding the feasibility of merging the colleges are detailed below.

## Examination of Other Public Universities with Combined Colleges of Science and Engineering

After a thorough review of public and private universities in the United States, over 30 institutions were identified that had some form of a combined College of Science and Engineering. The majority of these institutions were smaller, education-focused schools with limited doctoral and research programs. As the focus of this study was on peer or aspirational institutions, seven other public universities were selected for detailed comparison with NDSU: University of Minnesota-Twin Cities, University of Minnesota-Duluth, Texas State University, Northern Arizona University, Central Michigan University, Louisiana Tech University, and Idaho State University.

Data about the eight institutions (NDSU plus seven comparators) were collected from various sources to provide a basis for comparison regarding the resources needed in the Dean's Office if the two NDSU colleges were merged. These data allow for an informed comparison based on the size of the college (e.g., academic programs, enrollments, faculty), and research productivity (e.g., research expenditures, doctoral degrees, etc.). Data sources included the 2014 NSF Higher

Education Research and Development (HERD) Survey, the 2015 Carnegie Classifications of Institutions of Higher Education (CCIHE), and each institution’s websites.

The data and rankings for the eight institutions from the HERD survey and CCIHE are shown in Table 1. College enrollments, programs, and personnel data for the combined Colleges of Science and Engineering are shown in Table 2.

**Table 1**  
CCIHE and HERD Data for Universities with Combined Science and Engineering Colleges

| <b>Institution</b>                  | <b>Carnegie Classification</b>             | <b>HERD Ranking</b> | <b>Science and Engineering R&amp;D Expenditures</b> | <b>Undergrad Enrollment</b> | <b>Graduate Enrollment</b> | <b>STEM Doctoral Degrees</b> |
|-------------------------------------|--|---------------------|---|-----------------------------|----------------------------|------------------------------|
| University of Minnesota-Twin Cities | Doctoral Univ.: Highest Research Activity  | 15                  | \$850,880,000                                       | 34,351                      | 16,796                     | 383                          |
| North Dakota State University       | Doctoral Univ.: Higher Research Activity   | 122                 | \$148,352,000                                       | 12,124                      | 2,623                      | 48                           |
| Texas State University              | Doctoral Univ.: Higher Research Activity   | 211                 | \$25,910,000  | 32,177                      | 4,562                      | 8                            |
| Northern Arizona University         | Doctoral Univ.: Higher Research Activity   | 223                 | \$30,903,000  | 23,328                      | 4,377                      | 12                           |
| Central Michigan University         | Doctoral Univ.: Higher Research Activity   | 289                 | \$11,506,000  | 20,671                      | 6,208                      | 13                           |
| Louisiana Tech University           | Doctoral Univ.: Mod. Research Activity     | 251                 | \$17,088,000  | 9,532                       | 1,693                      | 13                           |
| Idaho State University              | Doctoral Univ.: Mod. Research Activity     | 261                 | \$19,962,000  | 11,517                      | 1,912                      | 10                           |
| University of Minnesota-Duluth      | Master's Colleges & Univ.: Larger Programs | 253                 | --  | 9,987                       | 1,106                      | --                           |

**Table 2**  
College Data for Universities with Combined Science and Engineering Colleges

| <b>Institution</b>                  | <b>Total College Enroll.</b> | <b>Graduate Enroll.</b> | <b>No. of Depts.</b> | <b>Undergrad Majors</b> | <b>Masters Programs</b> | <b>Doctoral Programs</b> | <b>Faculty</b> | <b>Assoc. Deans</b> | <b>Dean's Office Staff</b> |
|-------------------------------------|------------------------------|-------------------------|----------------------|-------------------------|-------------------------|--------------------------|----------------|---------------------|----------------------------|
| University of Minnesota-Twin Cities | 8,064                        | 2,732                   | 12                   | 18                      | 24                      | 17                       | 433            | 3                   | > 50                       |
| North Dakota State University*      | 4,286                        | 686                     | 15                   | 24                      | 26                      | 18                       | 227            | 1                   | 10                         |
| Texas State University              | 5,880                        |                         | 7                    | 26                      | 16                      | 3                        | 185            | 3                   | 8                          |
| Northern Arizona University         | 6,917                        | 431                     | 10                   |                         | 11                      | 6                        | 257            | 2                   | 7                          |
| Central Michigan University         | 2,508                        | 352                     | 8                    | 15                      | 10                      | 3                        | 154            | 2                   | 14                         |
| Louisiana Tech University           |                              |                         |                      | 14                      | 6                       | 4                        |                | 2                   | 9                          |
| Idaho State University              | 2,328                        | 332                     | 8                    |                         | 16                      | 7                        | 155            | 1                   | 5                          |
| University of Minnesota-Duluth      | 3,320                        | 220                     | 10                   |                         | 14                      | 2                        |                | 2                   | 10                         |

\*Data represent combined CSM and CoE, including ABEN and excluding ROTC programs.

Based on an examination of the data in Tables 1 and 2, the following observations can be made:

- With the exception of the University of Minnesota-TC, all other institutions fall well below NDSU in terms of STEM research productivity, although many have larger total enrollments than NDSU. The University of Minnesota-TC, on the other hand, is one of the leading research institutions in the US, with a budget substantially larger than that of NDSU. These discrepancies make direct comparison with peer institutions challenging.
- If combined, NDSU's new college would have a total student enrollment that falls roughly in the middle of the compared institutions. However, graduate enrollment and STEM doctoral degree production would be substantially larger than most other institutions.
- With the exception of Idaho State University, all the compared institutions have 2 – 3 Associate Deans in the College of Science and Engineering. Dean's Office staffing levels, however, vary substantially, from 5 to over 50 staff members. Based on current staffing levels between the CSM and CoE, NDSU would have one part-time Associate Dean and 10 staff members in the combined college.

## Evaluation of Survey and Interview Data

An extensive series of interviews and electronic surveys were conducted to gather input from various constituents in the CSM and CoE, including faculty, staff, graduate students, Chairs, Deans, and the President of the NDSU Foundation and Alumni Association. In-person interviews were conducted with the two Deans and Foundation President, while surveys were used to gather opinions from the remaining groups. These activities requested feedback regarding the potential positive and negative impacts of a merger on a wide range of issues, including research and scholarly activities; undergraduate and graduate education; mission, vision, values and program identity; professional accreditation of programs; promotion and tenure process; climate and morale; outreach programs and services; alumni support and donations; student recruitment; opportunities for efficiencies and shared services, etc.

The response rate to the surveys was outstanding, with 113 faculty, 39 staff, and 105 graduate students providing some level of feedback. This was clearly an issue of great interest to the personnel in the two colleges. The full reports from the surveys and interviews are included as supplemental documentation to this report. Condensed summaries are provided here, intended to capture the common themes that emerged from the responses in each area.

### Research and Scholarly Activities

- Many respondents indicated the proposed merger would have neither a positive nor a negative impact on research activities. Research collaborations are already occurring between faculty members in the two colleges, and there are few barriers to establishing interdisciplinary research groups. A merger of the two colleges would thus have little impact on research collaborations.
- Several respondents, however, did raise concerns about the differences in research culture between the two colleges, specifically regarding differences between the basic research focus in the CSM vs. the applied research focus in the CoE. Concerns were raised regarding the distribution of resources that may result from different research priorities.
- A few respondents noted the potential for a positive impact, due to the increased collaborations that could arise through closer relationships between faculty in science, math, and engineering.

### Undergraduate and Graduate Education

- Most respondents saw no significant benefit to educational activities resulting from a merger, as courses are taught primarily at the department level and there are few current barriers to collaboration.
- Some potential positive impacts were noted, including better diversity of course offerings, reduced overlap between departments, more opportunities for interdisciplinary classes, ability to share teaching loads, and better access to courses.
- Several negative impacts were also listed, which focused on differences in expectations and standards between the two colleges, potential impacts on accreditation, increased competition for GTAs, and the impairment of curriculum development that may occur due to reduced administrative oversight.

### College Mission, Vision, Values, and Program Identity

- The majority of responses in this category ranged from a neutral impact to mostly negative impact.
- Many respondents noted that the two colleges have significantly different missions, visions, and identities, and aligning them would be difficult and would tend to dilute the brands of each college. While the identity of individual programs may remain strong, most felt there would be an overall negative impact on the mission of the merged college.
- Some positive benefits were noted, such as a potential to strengthen the value placed on translational research.
- Several concerns were also expressed regarding territorial disputes, and in particular that math and science would suffer more from lack of identity if absorbed into engineering.

### Professional Accreditation of Programs

- While all academic programs in the CoE are accredited, very few in the CSM maintain professional accreditation. As accreditation is granted at the program level (rather than the college level), many respondents felt there would be little impact from such a merger.
- Other respondents, however, expressed concerns that the need to accredit engineering programs may draw attention and resources away from non-accredited programs in the merged college. Others expressed concerns about cultural differences between accredited and non-accredited programs, as some faculty in the CSM view accreditation as a potential threat to academic freedom.

### Promotion and Tenure Process

- A significant number of concerns were raised on this issue among faculty and Chairs. The responses were highly negative.
- Many concerns focused on the differing expectations and measures of scholarship between the two colleges, as well as the differences in PTE criteria. There are already significant differences between departments in each college, which will likely grow in a merged college. These differences would require significant work among faculty to realign the colleges' PTE documents.
- It would be difficult to create a one-size-fits-all approach to PTE given the substantial differences in expectations among departments. This may also have impacts on faculty recruitment.
- Concerns were also raised regarding the makeup of the PTE committee, which would likely not include representatives from all departments due to the large number of departments in a merged college, and the increased workload on the Dean of the merged college.
- If combined, the PTE committee would need to have greater respect for the process within each department, due to the varying levels of expectations between departments. This is already a challenge within each college, which will be exacerbated through a merger.

### Climate and Morale

- Again, the responses were mostly negative concerning climate and morale, although some respondents noted it would depend on several factors, most notably how the administration of the new college approached the challenges that would arise from a merger.
- Many concerns were expressed that there would be a larger gap between administration and faculty/staff, which would lead to a decline in responsiveness and weaken morale. Staff

members, in particular, expressed concerns about increased workload in a new, larger college.

- Some faculty expressed concerns about a negative impact on faculty retention due to a loss of morale. Also, the poor gender ratio in engineering, as compared to science and math, may result in an overall negative impact on climate.

#### Outreach Programs and Services

- The two Deans noted mixed impacts on outreach. Notably, outreach to alumni may suffer from such a merger, as the Dean of the merged college would be stretched more thinly in trying to connect with a broader alumni base. However, some of the K-12 outreach efforts may see a positive impact. Currently, there are several K-12 outreach programs that are jointly supported by the two colleges. A merged college could promote efficiencies in these programs.

#### Alumni Support and Donations

- Feedback from Deans, Chairs, and the NDSU Foundation President indicated both potential positive and negative impacts on alumni support and donations. In the short term, it would be expected to result in a negative impact on fundraising; however, those effects would mitigate over time.
- Many alumni affiliate with the department rather than the college, so the impact on those donors should be small.
- For the big donors, those looking for transformative gifts, the merger has the potential to be positive. For example, these donors may have an interest in creating an innovative research center that requires faculty from intersecting disciplines. They might view such a merger as innovative and an opportunity to create new research directions.

#### Student Recruitment

- Minimal impact was generally noted on the recruitment of undergraduate and graduate students. Students typically focus on majors/programs rather than colleges, so the makeup of the college should not greatly affect this. Some graduate students may see opportunities for more diverse research collaborations, which could be a plus. However, some undergraduates may be deterred from enrolling in a very large college.

#### Opportunities for Efficiencies and Shared Services

- There were several opportunities for efficiencies that were noted by staff, Chairs, and Deans, although the potential budget savings would require further study.
- Finance and accounting operations could become more efficient through consolidation; however, the majority of these operations are currently handled at the department level, so this would require significant restructuring throughout the merged college.
- IT operations could also see reduced costs through consolidation; however, the staffing at the college level is fairly limited. Many departments have their own IT staff, so this would again necessitate further study to gauge the impact of consolidation.
- Similarly, most advising is handled at the department level, with the exception of a college level advisor for undecided engineering students. A combined advising staff could reduce the load on faculty, but would be more challenging due to the greater diversity in academic programs.

- Combining Computer Science with Electrical and Computer Engineering may have the potential to create efficiencies through shared teaching loads and staff, as there is already considerable overlap in the curricula.
- Barriers to enhanced efficiencies include the physical separation of offices between the two colleges, the lack of resources needed to increase research productivity, high current workloads with lean staffing levels in the two Dean's Offices, and the potential for decreased responsiveness in operations within a larger college.

#### Opportunities for Shared Governance

- This will depend on the willingness and collaboration of the administration and faculty. A merger could potentially generate a more top-down approach due to the size of the college. With the greater cultural differences between faculty in the CSM and CoE, it will become more challenging to balance competing perspectives in developing policies and priorities for the college.

#### Other Concerns and Positive or Negative Impacts

- A variety of other impacts were listed by the various constituent groups, most of which were negative.
- Several respondents addressed the need for Associate Deans to handle the increased workload within the Dean's Office. As the Dean will be more involved in alumni engagement and fundraising, there will be a significant need for Associate Deans to oversee the academic and research functions in the college. This will reduce the cost savings associated with the elimination of one Dean position.
- Numerous staff expressed concern about increased workloads with reduced staffing levels. Both Dean's Offices already have fairly lean staffing levels compared to peer institutions. This leaves little room for reductions in a merged college. Also, this may lead to increased paperwork and bureaucracy.
- The new Dean of this merged college will require a unique skill set due to the breadth and diversity of programs. This may require a higher salary to recruit an individual with specialized skills.
- A few positive impacts were also noted, such as the potential to share professional staff, instrumentation, and facilities. Also, educational benefits to students could arise due to the more diverse academic backgrounds within the merged college.

### Examination of Current and Projected Staffing Levels

A review of current staffing levels in the two Dean's Offices was performed to provide a basis for potential cost savings in a merged college. This analysis focused only on appropriated salaries and operating funds. In both Dean's Offices, some staff salaries are currently funded in whole or in part by non-appropriated funds. Those funds were not included in the analysis. Shown in Table 3 below are the current staffing levels and appropriated salaries and operating funds in the two Dean's Offices.

Also shown in Table 3 are the recommended Dean's Office staffing levels for a merged college. These recommendations are offered by the committee based on the analysis of comparable

institutions and feedback from the surveys, with the intent to maintain current functionality (at a minimum) while also accounting for targeted growth in enrollment and research productivity as outlined in NDSU’s Strategic Plan. Salary levels were based primarily on current staff salaries. Specific justifications for the recommended staffing levels are detailed following the table.

**Table 3**  
Staffing Levels and Appropriated Salaries and Operating Funds in Current Dean’s Offices

| <b>Current Staffing (CSM &amp; CoE)</b> |                            | <b>Recommended Staffing (Merged College)</b> |                            |
|---|----------------------------|--|----------------------------|
| <b>Position</b>                         | <b>Appropriated Salary</b> | <b>Position</b>                              | <b>Appropriated Salary</b> |
| Deans (2)                               | \$476,602                  | Dean   | \$240,000                  |
| Associate Dean (CSM, 40%)*              | --                         | Associate Deans (2)                          | \$300,000                  |
|   |                            |  |                            |
| Assistants to the Dean (2)              | \$88,353                   | Assistant to the Dean                        | \$45,000                   |
| Finance/Budget/Admin (2)                | \$155,207                  | Finance/Budget/Admin (2)                     | \$155,000                  |
|   |                            |  |                            |
| Dir. of Advancement (CoE)               | \$66,731                   | Advancement/Alumni Rel.                      | \$66,000                   |
| Dir. of Stud. Support (CoE)**           | \$43,760                   | Student Support/Advising                     | \$65,000                   |
| IT Manager (CoE)***                     | \$67,034                   | IT Manager                                   | \$74,000                   |
| STEM Outreach Coord. (CoE)              | \$59,187                   | STEM Outreach Coord.                         | \$60,000                   |
| STEM Instruct. Coord. (CSM)             | \$75,776                   | STEM Instruct. Coord.                        | \$75,000                   |
| Extension Engineer (CoE)                | \$77,236                   | Extension Engineer                           | \$77,000                   |
|   |                            |  |                            |
| Pool Funds (CSM)                        | \$81,194                   | Pool Funds                                   | \$80,000                   |
| Vacant Positions (CSM)                  | \$22,349                   |  |                            |
|   |                            |  |                            |
| <b>Total Salaries</b>                   | <b>\$1,213,429</b>         | <b>Total Salaries</b>                        | <b>\$1,237,000</b>         |
| <b>Total Operating</b>                  | <b>\$430,652</b>           | <b>Total Operating</b>                       | <b>\$400,000</b>           |
|   |                            |  |                            |
| <b>Total</b>                            | <b>\$1,644,081</b>         | <b>Total</b>                                 | <b>\$1,637,000</b>         |

\* Stipend provided by non-appropriated funds

\*\* Total salary = \$65,669

\*\*\* Total salary = \$73,983

*Justifications*

- Due to the large time commitment expected for the new Dean to engage in external activities, as well as the large size of the merged college, two full-time Associate Deans are recommended by the committee. One would focus primarily on undergraduate academic issues (including oversight of programs, assessment and accreditation,

recruitment, etc.), and the other on research and graduate programs (such as building collaborative research programs, graduate student recruitment and assistantships, etc.).

- Administrative support staff positions could likely be somewhat reduced from current levels due to increased efficiencies in a merged office.
- Positions associated with IT support, advising, advancement/alumni relations, STEM instruction coordination, and K-12 STEM outreach efforts are maintained at current levels, despite the obvious increase in responsibilities that would develop from a merged college. Currently, many of these support activities are handled within departments (notably IT and advising), with limited coordination at the college level. Combining some of these activities at the college level could lead to increased efficiencies.
- The Engineering Extension position is retained in the merged college, due to the value this position brings in serving the citizens of North Dakota. However, the responsibilities of this position may need to be altered in a merged college.
- The operating budget has been reduced from the current levels in the two separate colleges, as a result of increased efficiencies that would be anticipated.
- Pool positions for adjuncts and graduate assistants are maintained at current levels.

The analysis above indicates minimal cost savings can be achieved by merging the two colleges, with an emphasis on maintaining support functions as currently provided by the two Dean's Offices. When comparing the recommended staffing levels with those of the compared institutions in Table 2, they are very similar to those institutions despite the higher level of research output and STEM doctoral degrees produced by NDSU (with the exception of UM-TC).

## Recommendations

Due to the limited potential for cost savings by merging the two Dean's Offices, and the strong sentiment against a merger by the faculty, staff, and students in the two colleges, the committee recommends *against* merging the College of Science and Mathematics and the College of Engineering. However, the committee recognizes other potential cost savings that can potentially be achieved through certain consolidations *within* each college. Further study would be required to identify specific cost savings that could be realized. In addition, the committee recommends that any consideration of cost savings through consolidation of services be balanced by the potential loss of responsiveness in such services at the departmental level.

Potential opportunities for cost savings include the following:

- *Consolidation of budget/finance operations at the college level.*  
Currently, most departments in both colleges maintain staff members to provide budget and finance support for appropriated and non-appropriated funds, including research funds. By merging departmental staff into a common college-level office, cost savings may be achieved due to more efficient operations.
- *Consolidation of IT support functions at the college level.*  
Due to the high use of computational resources for both educational and research needs in the two colleges, several IT support staff are currently employed at both the college and department levels in the two colleges. Through consolidation of these staff members into

a common group within each college, there is a potential to reduce costs through more efficient operations.

- *Consolidation of student advising functions at the college level.*

While many of the advising functions are currently handled by faculty, there are several professional advisors currently employed in the two colleges. Given the variety of disciplines, consolidation of advising functions at the college level could prove difficult and may in fact have a negative impact on students. Nevertheless, the potential for reduced advising loads on faculty could lead to other benefits in meeting educational and research goals, resulting in broader positive impacts to each college.