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Office of the Vice President for Information Technology

# NDSU Technology Action Plan Request

## I. Action Plan Introduction and Authorizations

| NDSU ORGANIZATION OR UNIT |
|---|
| Department of Communication<br>Office of Teaching and Learning |

| TITLE OF PROJECT |
|---|
| **Scaling Up Minard** |

| | | | |
|---|---|---|---|
| **Project Duration (3 years maximum)** | **From: May 16, 2016** | | **To: August 19, 2016** |
| **Type of Project (Check one)** | **New** X | **Previously Submitted** | **Renewal** |
| **Total Technology Fee Request $81,724 total technology needs (partial funding considered)** | | | |

| | | |
|---|---|---|
| **Project Director**<br>**(Must be NDSU faculty or staff)**<br>Melissa Vosen Callens,<br>Assistant Professor of Practice / Communication<br><br>Paul Kelter,<br>Professor / Director<br>Office of Teaching and Learning<br><br>Carrie Anne Platt,<br>Associate Professor / Communication | **Dr. Vosen Callens's Campus Address:**<br>338-D10 Minard Hall<br>**Phone:** 701.231.7815<br>**Fax:** 701.231.7784<br>**E-mail:** melissa.vosen@ndsu.edu<br><br>**Dr. Kelter's Campus Address:**<br>FLC 314-J<br>**Phone:** 701.231.6336<br>**E-mail:** paul.kelter@ndsu.edu | **Dr. Platt's Campus Address:**<br>338-B12 Minard Hall<br>**Phone:** 701.231.7294<br>**Fax:** 701.231.7784<br>**E-mail:** carrieanne.platt@ndsu.edu |

| Name (Type or Print) | Signature | Date |
|---|---|---|
| **Project Director**<br>Melissa Vosen Callens | | 1-14-16 |
| **Unit Head**<br>Mark Meister | | 1-15-16 |
| **IT Division Consultant**<br>Zach Anderson | Signature | Date<br>1-14-16 |

**Executive Summary (maximum of 175 words)**

We propose moving the SCALE-UP (Student-Centered Active Learning Environment) technology and furniture in Dunbar 152 to Minard 112, supplementing it with additional SCALE-UP technology and furniture, and resupplying Dunbar 152 with an appropriate configuration. As they are currently utilized, Dunbar 152 serves significantly fewer students than Minard 112. The average class size in Dunbar 152 was 12 students in Fall 2015, while Minard 112 had an average class size of 63 students. Moving the equipment would increase the number of students exposed to SCALE-UP and active learning techniques, which in turn could improve learning and pass rates in higher-enrollment courses. Minard 112 has been evaluated by Classroom Technology Services and identified as a space conducive to a SCALE-UP configuration. Dunbar 152 is less ideal from a pedagogical standpoint; with little room to move around, instructor interaction with students is limited. Finally, there is a growing number of faculty who teach large-enrollment courses interested in SCALE-UP. With more faculty being trained in active learning, we anticipate the demand for SCALE-UP classroom spaces to increase.

We will only accept for consideration Technology Action Plan Request forms, which are fully completed and signed according to the guidelines listed in the Instructions, pages 1 and 2.

Technology Action Plan Request forms will be opened and reviewed after the submission deadline.

# NDSU Technology Action Plan Request

## II. Project Overview

**1. How does this project meet student needs?**

SCALE-UP classrooms are most often used in moderate-to-large-enrollment courses to facilitate active learning, which has been shown to improve learning outcomes and increase pass rates. By implementing this project, the number of students exposed to active learning techniques will increase by approximately 405 students a semester.

Active learning, which has students as the focus of the consideration of ideas, provides students with opportunities to practice critical thinking skills, hone decision making skills, and undertake problem solving processes (Waitkus, 2011), all of which have been identified by employers, alumni, and members of faculty as key competencies for student success in the 21st Century (Hart and Associates, 2013). The 2013 National Survey of Student Engagement (NSSE) data show NDSU students reporting less engagement in reflective and integrative learning than students at peer institutions; this is the case for both first-year and senior-level students. Creating more active learning environments to serve larger class sizes, such as the one described in this proposal, is an empirically-tested method of increasing engagement.

**2. What audience does this project directly serve? What audience is indirectly served? How many students are affected?**

This project benefits all students on campus, as Minard 112 is a general-purpose classroom. A variety of courses from four different colleges are taught in Minard 112. Based on room capacity, it is estimated that an additional 405 students a semester will benefit from moving the SCALE-UP system from Dunbar to Minard. This project also benefits faculty who teach mid-sized (70 or lower) courses and want to incorporate active learning techniques into their classroom, but might not otherwise have access to SCALE-UP technology.

**3. For projects that target a subset of NDSU's students, please describe the possibility for broader application in the future.** This project benefits all students.

**4. Describe both the immediate and long-term impact of this project.**

When the active learning strategies they enable are implemented successfully, SCALE-UP classrooms have been found to increase conceptual understanding (Beichner et al). In their research on improving learning in chemistry courses, Oliver-Hoyo and her colleagues demonstrated that exam scores increased when students were exposed to active teaching and learning practices. On the last three out of the four exams, 25% of the student population in the active learning classroom outperformed the equivalent population in the conventional lecture (Oliver-Hoyo, Allen, Hunt, Hutson, & Pitts, 2004, 447). Direct impacts of implementing this project will include an immediate increase in the number of students benefitting from this classroom technology and the increased success research has shown from using these methods. In the long-term, more faculty will get to experience classroom success with this technology in mid- to large-enrollment courses. Finally, this project supports NDSU's commitment to improving retention and graduation rates for undergraduates ("NDSU Strategic Vision").

**5. Who will pay for ongoing expenses following the technology fee funded portion of this project (e.g., who will replace hardware or software after it has reached its end of life)?**

Since both Dunbar 152 and Minard 112 are general-purpose classrooms, outdated hardware would be replaced by ITS. While there would be some new technology needed for this proposal – as Minard 112 is a bigger classroom – much of it is existing technology that is already maintained by ITS.

**6. Describe how this project will follow NDSU's best practices in information technology. (Please make sure the NDSU IT Division staff you consulted signs in Part I of this form.)**

SCALE-UP classrooms are spaces that support active learning, a practice that is universally recommended by experts in instructional design and pedagogy. Many reputable institutions have implemented SCALE-UP configurations on their campuses, including North Carolina State, MIT, Minnesota, McGill, Iowa, Virginia Tech, Old Dominion, Northern Michigan, and Oklahoma ("SCALE-UP"). SCALE-UP is also central to the design of NDSU's new STEM Education building.

In addition, our Classroom Technology Services Department has evaluated Minard 112 and agrees that this space is conducive to SCALE-UP. In the past, they have received complaints in regard to the limitations of the space from faculty teaching in Dunbar 152. By approving this proposal, both spaces can be better utilized to support learning.

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**7. What service on campus is most similar to the one proposed here? How does this project differ?**
Currently, there are two SCALE-UP classrooms in the new STEM building; these rooms are already heavily scheduled with biological sciences courses, as the department has committed to reducing the size of their large-enrollment courses and teaching more sections in SCALE-UP rooms. In addition, there is one SCALE-UP room in Dunbar. Moving the equipment from Dunbar 152 to Minard 112 would mean that more students would be exposed to SCALE-UP technology and active learning techniques. We are not seeking to replicate existing services, but to extend the impact of SCALE-UP classrooms and active learning strategies at NDSU.

## III. Project Description (5 pages maximum)

### Include information on the background of this project: how did it come to fruition?

**Description of the Project:** We propose moving the SCALE-UP technology and classroom furniture in Dunbar 152 to Minard 112 and supplementing it with additional SCALE-UP technology and furniture (to account for the larger space). This proposal emerged for three reasons: Dunbar 152 currently serves very few students, Dunbar 152 is an unusually small SCALE-UP room, and there are an increasing number of faculty who are trained to teach in a SCALE-UP environment. This project will significantly increase the number of students exposed to active learning techniques, improving learning outcomes and pass rates in high enrollment courses on campus.

SCALE-UP classrooms are most often used in moderate-to-large enrollment courses to facilitate active learning. Active learning provides students with opportunities to practice critical thinking skills, hone decision making skills, and undertake problem solving processes (Waitkus, 2011), all of which have been identified by employers, alumni, and members of faculty as key competencies for student success in the 21st Century (Hart and Associates, 2013). The 2013 National Survey of Student Engagement (NSSE) data show NDSU students reporting less engagement in reflective and integrative learning than students at peer institutions; this is the case for both first-year and senior-level students. Engagement can be especially problematic in large-enrollment courses. The use of SCALE-UP technology in larger courses such as are hosted in Minard 112 will result in better student engagement.

When the active learning strategies they enable are implemented successfully, SCALE-UP classrooms have been found to increase conceptual understanding (Beichner et al., 2007). In their research on improving learning in chemistry courses, Oliver-Hoyo and her colleagues demonstrated that exam scores increased when students were exposed to active teaching and learning practices. On the last three out of the four exams, 25% of the student population in the active learning classroom outperformed the equivalent population in the conventional lecture (Oliver-Hoyo, Allen, Hunt, Hutson, & Pitts, 2004, 447).

***Course Enrollments:*** Dunbar 152 seats 45 students; however, the average class size in Fall 2015 was approximately 12 students. Currently, Dunbar 152 is used throughout the day, but many of the classes scheduled in the room are small (under ten) graduate-level courses in chemistry and biochemistry (see Table 1: Fall 2015 and Spring 2016 Courses and Enrollment for Dunbar 152).

**Table 1: Fall 2015 and Spring 2016 Courses and Enrollment for Dunbar 152**

| Fall 2015 | Spring 2016 (Enrollment as of 12-8-15) |
|---|---|
| BIOC 719: 13 students | AGRI 496: 0 students |
| CHEM 364: 24 students | BIOC 474 / 674: 22 students |
| CHEM 724: 0 students | BIOC 483 / 683: 7 students |
| CHEM 741: 6 students | CHEM 725: 1 student |
| CHEM 748: 4 students | CHEM 745: 1 student |
| CHEM 793: 0 students | CHEM 793: 0 students |
| MATH 266: 33 students | COMM 216: 20 students |
| SPAN 201: 12 students | COMM 442: 34 students |
| STAT 447: 12 students | ENGL 324: 22 students |
| STAT 767: 0 students | ENGL 325: 22 students |
| STEM 303: 33 students | LANG 102: 5 students |
| STEM 303: 6 students | SPAN 401: 13 students |
| STEM 810: 9 students | STEM 303: 0 students |
| | UNIV 151: 45 students |

Minard 112 currently seats 110 students in conventional format. Making Minard 112 a SCALE-UP classroom would reduce capacity to 72 (38 fewer seats), but would greatly expand the number of students engaged with active, evidence-based teaching practices (see Table 2: Fall 2015 and Spring 2016 Courses and Enrollment for Minard 112). Like Dunbar 152, Minard 112 is used throughout the entire day.

In fall 2015 and spring 2016, only seven out of the 23 courses scheduled in Minard 112 would be too big for a 72-seat SCALE-UP classroom. These sections, however, could be moved to one of the non-SCALE-UP rooms in the new STEM building or some of the larger classrooms made available now that the STEM building has opened.

**Table 2: Fall 2015 and Spring 2016 Courses and Enrollment for Minard 112**

| Fall 2015 | Spring 2016 (Enrollment as of 1-8-16) |
|---|---|
| ANSC 300 (2 sections, same time): 76 students | CJ 230: 47 students |
| ANSC 323: 77 students | COMM 375: 19 students |
| ANSC 463 / 663: 30 students | COMM 690: 4 students |
| BIOL 491 / BOT 491 / ZOO 491: 47 students | CSCI 716: 20 students |
| CJ 201: 83 students | MATH 146: 98 students |
| COMM 216: 20 students | MATH 146: 73 students |
| ECE 341 / ECE 793: 46 students | PSYC 468 / 668: 35 students |
| MATH 146: 97 students | THEA 280: 22 students |
| MATH 146: 95 students | |
| MATH 146: 89 students | |
| PHIL 101: 42 students | |
| PHYS 251: 63 students | |
| PSYC 214 / SOC 214: 27 students | |
| PSYC 280: 55 students | |
| UNIV 150: 102 students | |

***Limitations of Dunbar 152*:** Dunbar 152 is less than ideal from a pedagogical standpoint: there is approximately four feet between tables, so students have little room to move around, which can hinder collaboration and impede learning. If the SCALE-UP equipment were moved to Minard 112, there would be approximately seven feet between tables. The high vaulted ceilings in Minard 112 would also allow for multiple projection units, which Dunbar 152 currently has, but not in an ideal configuration. The limited floor space and lower ceiling does not allow for appropriate distribution of the screens.

Minard 112 has already been evaluated by Classroom Technology Services and has been identified as a classroom conducive to this type of remodel as it provides a flat surface and high-vaulted ceilings.

***Demand for SCALE-UP Classrooms:*** Many instructors have expressed interest in using a SCALE-UP classroom. Last year, Anne Kelsch and Brett Goodwin from the University of North Dakota presented on SCALE-UP classrooms at a Pedagogical Luncheon that had well over 100 attendees. As a response to the luncheon as well as the opening of the new STEM Education building, Dr. Jenni Momsen, Biological Sciences, has organized an active learning / SCALE-UP monthly discussion group. In addition, the current NSF-funded Gateways-ND faculty training project has 40 faculty members who are now trained to teach in a SCALE-UP configuration, and the demand will rise by roughly 40 such faculty per year for the next five years. Opportunities to teach in a SCALE-UP classroom, however, are limited. The STEM Education building has two SCALE-UP classrooms, but they are already fully scheduled for fall 2016, primarily for use by Biological Sciences. Since Dunbar 152 can only accommodate 45 students at its maximum capacity, moving the equipment to a larger classroom would allow for more classes, and more students, to use SCALE-UP technology.

**Support:** Registration and Records is committed to scheduling instructors who are trained in active learning techniques in SCALE-UP classrooms. In addition to Gateways-ND training, the proposed provost-funded Gateways and Beyond grant will permit the training of an additional 25 faculty members in the next two years alone. This campus-wide training in active learning is creating a meaningful shift in teaching and learning on our campus. As more and more instructors are trained in active learning techniques and SCALE-UP technology, the demand for SCALE-UP classrooms will only increase.

If our project were approved, there would be no classroom space lost. With the help of Classroom Technology Services, Dunbar 152 would be turned into an active learning classroom with movable desks and an instrumented instructor station, that could be used by faculty who employ active learning strategies but do not require SCALE-UP technology. The smaller-enrollment courses currently scheduled in Dunbar 152 would still be able to engage in active learning, while the larger-enrollment courses in Minard 112 would be given possibilities for active learning that did not exist before.

**The Team:** Our team (Melissa Vosen Callens, Carrie Anne Platt, and Kay Beckermann, Department of Communication and Paul Kelter, Office of Teaching and Learning) will work closely with Classroom Technology Services (Micah McGowen and Zach Anderson) to ensure that the appropriate equipment is purchased and installed.

**Milestones:** If approved, the remodeling would take place in Summer 2016 to avoid losing classroom space during the Spring 2016 or and Fall 2016 semesters, when it is needed and utilized the most. The Office of Teaching and Learning will provide SCALE-UP training sessions before the beginning of each semester.

**Budget:** Please see attached budget.

**Supporting Documentation:** Please see the attached letters of support.

## References


Beichner, R. J., Saul, J. M., Abbott, D. S., Morse, J. J., Deardorff, D., Allain, R. J., ... & Risley, J. S. (2007). The student-centered activities for large enrollment undergraduate programs (SCALE-UP) project. *Research-based Reform of University Physics*, *1*(1), 2-39.

Hart and Associates. (2013). "It takes more than a major: Employer priorities for college learning and student success." Washington, DC: Association of American Colleges and Universities and Hart Research Associates.

National Survey of Student Engagement. (2013). *NDSU.* Bloomington, IN: Indiana University Center for Postsecondary Research.

"NDSU Strategic Vision 2015-2020." (2015). Retrieved from https://www.ndsu.edu/fileadmin/provost/Forms/Strategic_Planning/Strategic_Vision_May_2015.pdf

Oliver-Hoyo, D., Allen, W., Hunt, J., Huston, J., & Pitts, A. (2004). Effects on an active learning environment: Teaching innovations at a research 1 institution. *Journal of Chemical Education*, *81*(3).

"SCALE-UP." (2011). Retrieved from http://scaleup.ncsu.edu/

Waitkus, J. (2011). Active learning in humanities courses: Helping students to think critically. *Journal of College Teaching & Learning (TLC)*, *3*(10).

# NDSU Technology Action Plan Request

## IV. Milestones

List the date for each project milestone. These milestones should represent the ***significant*** accomplishments that will be associated with the action plan. For each milestone, please indicate its expected outcome and the means for assessing that outcome. (The table may be extended as needed.)

| | Date | Milestone | Expected Outcomes | Means of Assessment |
|---|---|---|---|---|
| 1. | May and June 2016 | Tear down and move equipment / order new equipment / prep spaces | Equipment moved / purchases received / space prepped | Equipment in its new home and purchases completed |
| 2. | July and August 2016 | Install equipment / test equipment | Before training and classes start, team will install and test equipment | Logging issues as they arise, fix |
| 3. | August 2016 | Training offered for GATEWAYS-ND faculty and GATEWAYS and BEYOND faculty cohort | Faculty cohort will be educated on SCALE-UP technologies and their pedagogical applications | Solicit cohort feedback |
| 4. | August 2016 | Minard 112 and Dunbar 152 is open for classes | Students and staff can begin to use classroom and equipment | Track room usage |
| 5. | August 2016 | Work with Jenni Momsen's active learning group to offer continued support | Faculty in active learning spaces will share experiences and ideas | Solicit feedback, make changes to the room if necessary |

# NDSU Technology Action Plan Request

## V. Supporting Documentation

Please see attached.

NDSU NORTH DAKOTA STATE UNIVERSITY

Dear TFAC Selection Committee Members,

I am pleased to write this letter of support for the TFAC proposal being submitted by two faculty members in the College of Arts, Humanities and Social Sciences (Dr. Melissa Vosen Callens, Communication and Dr. Carrie Anne Platt, Communication), one graduate student (Kay Beckermann, Communication), and the Director of the Office of Teaching and Learning (Dr. Paul Kelter). The team is proposing moving the SCALE-UP configuration in Dunbar 152 to Minard 112 and supplementing Minard 112 with additional SCALE-UP technology. In addition to making better use of both spaces, this move would increase the number of students exposed to SCALE-UP active learning techniques on campus by approximately 400 students a semester.

Finally, I am also writing to confirm that the team and I are in an ongoing conversation about possible matching funds to help cover some of the non-technology related costs.

Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Kent Sandstrom
Dean and Professor

OFFICE OF THE DEAN | COLLEGE OF ARTS, HUMANITIES AND SOCIAL SCIENCES
NDSU Dept 2300 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8338 | Fax 701.231.1047 | www.ndsu.edu/ahss

NDSU NORTH DAKOTA STATE UNIVERSITY

January 15, 2016

Melissa Vosen Callens
College of Arts, Humanities and Social Sciences
Department of Communication
NORTH DAKOTA STATE UNIVERSITY

Dear Melissa:

I am writing to express my strong support for your proposal to TFAC with Paul Kelter and Carrie Anne Platt. The proposed project involves relocating furniture and technology from the SCALE-UP active-learning classroom in Dunbar 152 to a more central, larger location in Minard 112. Dunbar 152 would then be backfilled with furniture and technology to create a lower-capacity flexible classroom space that can be used for active-learning activities as well as more traditional teaching. As you know, Dunbar 152 was converted to a SCALE-UP classroom using funds provided by a donor to the College of Science and Mathematics' Classroom Modernization Fund. You, Paul, and I have discussed the rationale for the proposed changes and I find the rational to be convincing and in line with the donor's original intent. In particular, the relatively small size of Dunbar 152 and to some extent its location are not conducive to its full utilization as a SCALE-UP classroom for 45 students. Moving the furniture and equipment to Minard 112 allows the capacity to be expanded while at the same time providing adequate space for active-learning methodologies. Moreover, Minard 112 is in many ways more conveniently located and certainly more visible. Finally, since Dunbar 152 will still have active-learning capabilities, the proposed changes would increase the total number of room on campus that can be used for this highly effective pedagogy. For the time being, I must insist, however, that we maintain the donor recognition plaque outside of Dunbar 152. Although the configuration of the room will have changed, I believe that it is still fitting and proper to continue to recognize the donor's original contribution as this most certainly played a role in getting the campus excited about active-learning. Finally, I would note that we are in a continuing dialogue regarding the possibility that the College of Science and Mathematics might provide some financial support for the project. Please not hesitate to contact me if you have any questions.

Sincerely,

Scott Wood
Dean, College of Science and Mathematics

COLLEGE OF SCIENCE AND MATHEMATICS
NDSU Dept 2700 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.7411 | Fax 701.231.1047 | www.ndsu.edu/scimath

# NDSU Technology Fee Action Plan Request
## VI. Budget
(double-click on the form to begin entering data)

| | |
|---|---|
| 1. | NDSU ORGANIZATION OR UNIT<br>Department of Communiction, Office of Teaching and Learning |
| 2. | PROJECT DIRECTOR(S)<br>Melissa Vosen Callens and Carrie Anne Platt, Department of Communication<br>Paul Kelter, Office of Teaching and Learning |

| | | | | |
|---|---|---|---|---|
| 3. | SALARIES AND WAGES | | | |
| | Personnel description | Number employed | Number of months | Funds Requested |
| | A. Staff | N / A | | |
| | B. Graduate students | N / A | | |
| | C. Undergraduate students | N /A | | |
| 4. | TOTAL SALARIES AND WAGES | | | $0.00 |
| 5. | FRINGE BENEFITS | | | |
| 6. | TOTAL SALARY, WAGES AND BENEFITS | | | $0.00 |

| | | |
|---|---|---|
| 7. | EQUIPMENT | |
| | Creston SAROS_IC6T (Unit Price: 150 x 12) | 1,800.00 |
| | Creston Monitor Mount (125 x 2) | 250.00 |
| | Creston Projector Mount (100 x 2) | 200.00 |
| | Creston Ceiling Mount (150 x 2) | 300.00 |
| | Creston 9" pipe (25 x 2) | 50.00 |
| | Creston Projector (2500 x 2) | 5,000.00 |
| | Triplite Power Strip (60 x 1) | 60.00 |
| | Triplite Wireless Mouse (135 X 1) | 135.00 |
| | Triplite Keyboard (135 x 1) | 135.00 |
| | Triplite Sonic Shock 5 (110 x 2) | 220.00 |
| | Triplite Projector Secruity (50 x 2) | 100.00 |
| | Mid Atlantic MS- 5.5 (25 x 2) | 50.00 |
| | Mid Atlantic Pull Out Rack (2000 x 1) | 2,000.00 |
| | Mid Atlantic Rack Rail (60 x 3) | 180.00 |
| | Cables (200 x 1) | 200.00 |
| | Creston DM Cable (0.6 x 1500) | 900.00 |
| | Creston DMC 4K-HD (500 x 4) | 2,000.00 |
| | Creston DMC-C (688 x 5) | 3,440.00 |
| | Creston DMC-4K-CO-HD (813 x 4) | 3,252.00 |
| | Creston DM-RMC-SCLAER-C (1000 x 7) | 7,000.00 |
| | Creston DM-TX-401-C (1 x 1250) | 1,250.00 |
| | Creston CEN-SW-POE-5 (250 x 1) | 250.00 |
| | Creston DGE 100 (1250 x1) | 1,250.00 |
| | Creston TSD-2020 (1250 x1) | 1,250.00 |
| | Creston USB-EXT-DM-Local (375 x 2) | 750.00 |
| | Creston USB-EXT-DM-Remote (325 x 2) | 750.00 |
| | Biamp TeseraFORTE AI with AVB (2000 x 2) | 4,000.00 |
| | Creston AMP (1000 x 1) | 1,000.00 |
| | Sharp LC-60LE661U (1200 x 8) | 9,600.00 |
| | Chief TS525T (350 x 8) | 2,800.00 |
| | Creston DMPS-4K-150-C (2625 x 8) | 21,000.00 |
| | Creston TT-100 (188 x 24) | 4,512.00 |
| | Shure MX392/C (240 x 24) | 5,760.00 |
| | Mid Atlantic Rack Rails (35 x 8) | 280.00 |
| 8. | TOTAL EQUIPMENT | $81,724.00 |

| | | |
|---|---|---|
| 9. | MATERIALS AND SUPPLIES | |
| | A. | |
| | B. | |
| | C. | |
| | D. | |
| | E. | |
| | F. | |
| | G. | |
| | H. | |
| 10. | TOTAL MATERIALS AND SUPPLIES | $0.00 |

| | | |
|---|---|---|
| 11. | TOTAL TECHNOLOGY FEE REQUEST | $81,724.00 |
| 12. | MATCH (Describe in Match Section) | |
| 13. | TOTAL PROJECT EXPENDITURE | $81,724.00 |

# NDSU Technology Action Plan Request

## VII. Budget Justification

The requested projectors, screens, and additional technology are needed, as Minard 112 is larger than Dunbar 152. The technology requested would secure additional SCALE-UP stations in Minard 112, which will ultimately accommodate 72 students. We understand that our project may only be partially funded through TFAC, but are willing to work to secure funding from other sources (see budget match section and supporting documentation).

## VIII. Budget Match

1. Attempted Budget Matches:

   We have been in contact with Dean Scott Wood and Dean Kent Sandstorm about possible budget matches. At the time of submission, we have not secured any additional funding, but the conversation is ongoing.

   If funded, we also plan to contact the Learning Spaces Executive Committee, in hopes of funding some of the furniture needs for the classroom.

2. Actual Budget Matches: N / A

3. Additional Budget Match information: N / A