BOARD OF TRUSTEES
NORTH CAROLINA STATE UNIVERSITY
AGENDA

University Affairs Committee
2:45 p.m. – 4:15 p.m.  February 15, 2018
Winslow Hall Conference Room

Stan Kelly, Chair
Members: Jackie Gonzalez, Ann Goodnight, Wendell Murphy, David Nimocks, Ed Weisiger, Jr.

CALL TO ORDER
Stan Kelly, Chair

ROLL CALL
Stan Kelly, Chair

READING OF STATE GOVERNMENT ETHICS ACT CONFLICT OF INTEREST STATEMENT
Stan Kelly, Chair

1. CONSENT AGENDA

   A. Approval of November 16, 2017 Minutes (open & closed session) 7.1A
   B. Approval of December 1, 2017 Minutes (open & closed session) 7.1B
   C. Request to Continue Centers/Institutes 7.1C
      a. Center for Family and Community Engagement (CFACE)
      b. Center for Integrated Fungal Research (CIFR)
   D. Designation of Time Limited Option for Distinguished Professorships 7.1D
   E. Conferral of Tenure Requests 7.5A

2. REQUESTED ACTION

   ✓ A. Recommendation from Faculty Committee on Honorary Degrees
      Presenter: Warwick Arden, Executive Vice Chancellor and Provost

3. REPORTS

   A. Student Body President Report 7.3A
      Presenter: Jackie Gonzalez, Student Body President

✓ Denotes full Board approval required
B. Provost Update

   Presenter: Warwick Arden, Executive Vice Chancellor and Provost
   a. New Undergraduate Certificate in Interdisciplinary Entrepreneurship
   b. Reappointment, Promotion and Tenure Process Update

4. TOPIC OF INTEREST/COMMITTEE DISCUSSION

   A. Centers and Institutes Overview
      Presenter: Alan Rebar, Vice Chancellor, Research, Innovation & Economic Development

5. CLOSED SESSION

   A. Personnel Matters
      B. Honorary Awards

6. RECONVENE OPEN SESSION

7. ADJOURN

✓ Denotes full Board approval required
CONSENT
AGENDA
ITEMS
The University Affairs Committee of the Board of Trustees of North Carolina State University met November 16, 2017 in the Winslow Hall Conference Room.

Members Present: Stan Kelly, Committee Chair  
Jacqueline Gonzalez  
Ann Goodnight  
Wendell Murphy  
David Nimocks  
Ed Weisiger, Jr.  
Jimmy Clark, Board Chair

Chair Kelly called the meeting to order at 2:59 p.m. He called roll and certified that a quorum was present.

All members of the Committee were reminded of their duty to avoid conflicts of interest and appearances of conflicts of interest under the State Government Ethics Act. It was inquired as to whether there were any known conflicts of interest or appearances of conflict with respect to any matters coming before the Committee at this meeting. There being none, the meeting continued.

Consent Agenda
A motion was made by Mr. Murphy to approve the consent agenda items. Mr. Weisiger seconded the motion. The motion carried.

Requested Action
Chancellor Woodson, Provost Arden and Vice Chancellor/Dean Mullen presented the recommendations from the Tuition Review Advisory Committee and the Fee Review Committee for the 2018-2019 year. These recommendations are in keeping with the legislative considerations and instructions provided to campuses from UNC-GA for this year’s process and have been supported by the Chancellor. The instructions include no increases for resident undergraduate tuition and fee requests subject to capped fees are not to exceed an increase of 3%.

The Tuition Review Advisory Committee, co-chaired by the Provost and the Student Body President, approved the following campus initiated tuition increase (CITI) recommendations:

- a 0% tuition increase for undergraduate residents (new cohort)
- a 4% increase for undergraduate nonresidents
- a 5% increase for graduate residents
- a 6% increase for graduate nonresidents.

The Committee recommended that 64.7% of the tuition increase be used to improve quality and accessibility of the NC State educational experience. They recommended 8.8% be used to provide funding for faculty promotional increases and 26.5% of funding go to the Graduate Student Support Plan.

The Tuition Review Advisory Committee also approved two premium tuition requests. The funds generated through premium tuition are returned directly to the program. The committee recommended a premium tuition increase of $1000 per year effective Fall 2018 for the Master of Accounting degree program and a new tuition premium of $4300 per year effective Fall 2018 for the Joint Department of Biomedical Engineering – MS TraIn, Translation of Innovation.
Next, the fee recommendations for 2017-2018 were presented. The Fee Review Committee, co-chaired by the Vice Chancellor and Dean of the Division of Academic and Student Affairs and the Student Senate President, recommended continuance of existing fees for which an increase was not requested, and an increase to fees subject to the 3% cap by $43.00 for all students in the 2018-2019 academic year. This represents an increase of 1.7%.

After discussion, a motion was made by Mrs. Goodnight, and seconded by Mr. Murphy, to recommend to the full board approval of the 2018-2019 campus initiated tuition increases, premium tuition requests, and student fees as outlined in Chancellor Woodson’s recommendation under Tab 7.2A. The motion carried.

**Informational Reports**

The committee received several reports. First, Chancellor Woodson shared that he will deliver December’s commencement address.

The committee also received an update on Faculty and Staff Senate activities. The Faculty Senate has discussed topics ranging from the Intercollege Transfer Program to the Faculty Ombuds program. The Fall General Faculty meeting was held on October 3 with F&A – Facilities and Administrative costs associated with research activities – as the main discussion topic. The Staff Senate report highlighted many ways this group is fulfilling its theme of Communicating, Collaborating, and Connecting. Their weekly newsletter reaches nearly 6,000 and helps inform staff about issues including the recent State Health Plan open enrollment. They also organized a successful food drive in October among other initiatives.

Finally, Provost Arden shared information about new academic programs including: a new graduate certificate in Sport and Entertainment Venue Management, a Memorandum of Agreement for a Dual Degree Partnership – Juris Doctor, Campbell University and Master of Social Work, NC State - , and “3+X” program agreements between our Mathematics Department and three Chinese universities: South China Normal University, Huazhong University of Science & Technology, and Nanjing Normal University. These agreements allow students to complete 3 years at their home university and one or more years at NC State resulting in a Bachelors degree from the home university and a Master’s degree (Master of Mathematics or Master of Financial Mathematics) from NC State. Provost Arden also reported that leadership and program reviews are scheduled this year for two senior vice provost units.

Chair Kelly explained that as a result of the input received from committee members about topics of interest, the committee would receive a report on Living and Learning Villages. Vice Chancellor and Dean Mike Mullen provided the overview. There are currently 16 villages and initiatives that range from a passion for the arts or environment to major-specific villages. These villages promote academic success. Students living in villages tend to have higher GPAs than their non-village peers, their retention rates are higher, and they are more likely to graduate on time. The current village population is 2,213. Thirty-three percent (33%) of all residence hall residents live in villages and 45% of all first-year students live in a village.

**Closed Session**

At 3:47 p.m. Mr. Murphy made the motion, seconded by Mrs. Goodnight, to go into closed session to establish the amount of compensation and other materials terms of an employment contract or proposed employment contract; and to consider the qualifications, competence, performance, character, fitness, conditions of appointment or conditions of initial employment of an employee or prospective employee. The motion carried.

**Reconvene in Open Session**

After coming out of closed session, Chair Kelly announced the meeting in open session.

Ms. Gonzalez moved to approve the personnel items discussed in closed session related to the appointment and initial salary of a Dean and salary actions for the Tier I positions of Deans. Mrs. Goodnight seconded the motion. The motion carried.

With no further business, Chair Kelly announced the meeting adjourned at 4:02 p.m.

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Stan Kelly, Chair
The University Affairs Committee of the Board of Trustees of North Carolina State University held an emergency meeting via teleconference at 10:30 a.m. on December 1, 2017. The call originated from the Chancellor's Conference Room, Holladay Hall.

Members Present: Stan Kelly, Committee Chair
Jackie Gonzalez
Wendell Murphy
David Nimocks
Ed Weisiger, Jr.

Other Trustees Present: Jimmy Clark, Board Chair
Chip Andrews
Tom Cabaniss
Jim Harrell
Susan Ward

Chair Kelly called the meeting to order at 10:30 a.m. He called roll; a quorum was present. The other Trustees and meeting participants were identified.

All members of the Committee were reminded of their duty to avoid conflicts of interest and appearances of conflicts of interest under the State Government Ethics Act. It was inquired as to whether there were any known conflicts of interest or appearances of conflict with respect to any matters coming before the Committee at this meeting. There being none, the meeting continued.

A motion to go into closed session to establish or to instruct the public body's staff concerning the position to be taken by or on behalf of the public body in negotiating the amount of compensation and other material terms of an employment contract or future employment contract of a state employee under N.C.G.S. 143-318.11(a)(5) was made by Mr. Murphy and seconded by Mr. Nimocks. The motion carried.

After coming out of closed session, Chair Kelly announced the meeting in open session.

Mr. Murphy made a motion to approve the MOU of material terms for a Head Coach employment agreement with the typographical corrections discussed during Closed Session. Mr. Nimocks seconded the motion. The motion carried.

With no further business, Chair Kelly announced the meeting adjourned at 10:52 a.m.

Stan Kelly, Chair
MEMORANDUM

TO: Alan H. Rebar  
    Vice Chancellor for Research, Innovation and Economic Development

FROM: W. Randolph Woodson  
    Chancellor

SUBJECT: Recommendation to continue the Center for Family and Community Engagement (CFACE) under Regulation 10.10.04

DATE: January 22, 2018

In response to your Memorandum dated January 16, 2018, authorization is hereby granted to forward the request to continue the Center for Family and Community Engagement (CFACE) to the Board of Trustees for approval.

WRW/rmh

cc: Jeffrey Braden, Dean, College of Humanities and Social Sciences  
    Joan Pennell, Director, CFACE  
    Miaden Vouk, Associate Vice Chancellor, Research Development  
    Jonathan Horowitz, Assistant Vice Chancellor, Research Administration  
    Larisa Stark, Senior Administrative Coordinator – Centers and Institutes
MEMORANDUM

TO: W. Randolph Woodson  
Chancellor  
NC State University

FROM: Alan H. Rebar  
Vice Chancellor for Research, Innovation and Economic Development  
NC State University

SUBJECT: Recommendation to continue the Center for Family and Community Engagement (CFACE) under Regulation 10.10.04

DATE: January 16, 2018

In accordance with Regulation 10.10.04, the Office of Research, Innovation and Economic Development completed a Periodic review of the Center for Family and Community Engagement (CFACE) for the period 2013-2017.

The Report delivered by the Review Committee strongly supports continuation of the Center, and concludes that engagement of the Center with local, regional and global communities is strong under the leadership of its outstanding Director. The Center has a long-standing, productive partnership with the NC Division of Social Services within the Department of Health and Human Services (DHHS), and this partnership has expanded and strengthened during the period spanned by this review.

The Report includes a number of recommendations, including steps to increase staffing of the Center and expand the number of faculty and students engaged in Center programs. The recommendations of the Review Committee were largely accepted by the Center and the College of Humanities and Social Sciences (CHASS), and the College requests continuance of the Center.

The Office of Research, Innovation and Economic Development and the Provost endorse the request to continue CFACE as a university Center as sanctioned by the Board of Trustees, and I request your approval of this recommendation.

AHR/mh

cc: Jeffrey Braden, Dean, College of Humanities and Social Sciences  
Joan Pennell, Director, CFACE  
Mladen Vouk, Associate Vice Chancellor, Research Development  
Jonathan Horowitz, Assistant Vice Chancellor, Research Administration  
Larisa Slark, Senior Administrative Coordinator – Centers and Institutes
Review of the Center for Family and Community Engagement

Date of Review: November 10, 2017

External Evaluation Panel: Dean F. Duncan, III UNC-CH
Marian McCord NCSU
Melissa Raspa Research Triangle Institute

Overview

As required by the UNC System, the Center for Family and Community Engagement (CFACE) underwent a comprehensive review in 2017. The review consisted of the submission of a four-year report covering the time period of July 2013-June 2017. A day long set of interviews were conducted the Center Director, Dr. Joan Pennell, Center Staff, and key stakeholders including: Assistant Vice Chancellor Jon Horowitz, Dean Jeff Braden, Associate Dean Tom Birkland, the Center Leadership Team, members of the Networking Alliance, and other NC State faculty collaborators.

The Board of Trustees (BOT) approved the establishment of CFACE in September 2008. The Center is located in the College of Humanities and Social Sciences (CHASS). After five years of operation, the Center was reviewed and the BOT approved its continuation in July 2014. This current review comes one year earlier than the normal five-year review cycle. The Center will transition to a new director in July 2018.

Based on the report and the interviews, the following summary of strengths and opportunities is presented. These are organized according to the following review criteria drawn from NCSU review criteria:

- Performance against objectives and goals
• Quality and quantity of scholarly activity
• Responsible fiscal oversight, faculty participation, non-tenured faculty mentoring
• Proper management, required matching funds sufficient for operation
• Required space sufficient for operation
• Partner feedback of mutual benefits
• Non-duplication of UNC or State entities

The following table provides the NCSU Strategic Goals:

**University Strategic Goal**

*Goal 1: Enhance Local and Global Engagement through Focused Strategic Partnerships*

*Goal 2: Enhance Interdisciplinary Scholarship to Address the Grand Challenges of Society*

*Goal 3: Enhance the Success of Students Through Educational Innovation*

*Goal 4: Enhance Organizational Excellence by Creating a Culture of Constant Improvement*

*Goal 5: Enhance Scholarship and Research by Investing in Faculty and Infrastructure*

The review criterion of non-duplication of UNC or State entities is addressed at the end of the review.

**Goal 1: Enhance Local and Global Engagement through Focused Strategic Partnerships**

The report and key stakeholder interviews documented the Center’s accomplishments in three areas: family and youth leadership; community engagement; and alternative approaches, particularly those that reduce reliance on the criminal justice system. The strength of the Center engagement is in local and state partnerships, particularly the one with the North Carolina Division of Social Services (NCDSS). The global engagement builds on Dr. Pennell’s strong scholarship with global partners. The NCDSS partnership is broad and deep and has existed from the inception of the Center. The center promotes interdisciplinary collaboration on campus through the center’s faculty and student partners and in communities through its advisory council.
The strongest area of these three is in family and youth leadership. Building on the individual scholarship of Dr. Pennell’s work in family conferencing, the Center has played a key role in raising family voice in informing policy and practice. Beginning in FY 2013, the North Carolina Department of Health and Human Services (NC DHHS) increased funding to the Center to expand its activities supporting family-centered practice. In developing new curricula, the Center has involved youth, families, and agency workers as well as faculty and students on campus. In FY 2014, the Center was awarded a seed grant from the NC State University Office of Extension, Engagement, and Economic Development to develop youth-family-community partnerships known as the Youth Leadership Café. To address feelings of insecurity and powerlessness, the youth were engaged using the World Café model. This Youth Leadership Café led to the NC DHHS-funded Family Leadership Network Project in FY 2017. Also in FY 2017, the Center received funding from NC DHHS for supplementary family-centered practice training. This training was developed in part by faculty and students from Psychology, Communications, and Social Work as well as former foster youth.

Over the last four years, the Center extended its community engagement. This was done through three efforts, two of which were funded through the family-centered practice initiative funded by NC DHHS. The third involved an effort to reduce disparities in cancer screening between rural and urban communities. In FY 2017, NCDSS funded a research team led by the Center director and including students and faculty from Public Administration and Sociology to survey the work of Community Child Protection Teams. NCDSS also enlisted the aid of the Center to assist in developing revisions to its child welfare policy manual. A faculty member from Psychology assisted in this effort. In 2014, a faculty partner from Social Work was awarded an 18-month grant from the American Cancer Society to explore the impact of community health advisors in reducing disparities in cancer screening between urban and rural communities in the Southeast.

Two projects illustrate the Center’s activities in the area of alternative approaches. The first project, funded by NC DHHS, evaluated a program that provides a psycho-educational group on fathering to men who have abused their partners and whose families are receiving child welfare services. As part of the second project, the Center director, a doctoral student, and a faculty partner from Psychology began working with the Center for Court Innovations in New York, NY, as part of a
grant from the US Department of Justice. In a related area, the Center director is serving as part of a research team analyzing family meetings. The results of this analysis will be presented at an international conference.

**Goal 2: Enhance Interdisciplinary Science to Address the Grand Challenges of Society**

As part of its efforts to address this goal, the Center is partnering with scholars and practitioners from an array of disciplines on the scholarship of engagement. As noted above in the discussion of Goal 1, the Center routinely partners with faculty and students from a number of disciplines. It frequently engages practitioners, families, and youth. The Center continues to leverage its success from completed projects to obtain new funding. As noted previously, the Center received funding from NC DHHS in 2017 for the Family-Centered Practice Project. The Center also received a subcontract for 2017 and 2018 from the Center for Court Innovations.

Other work at the Center also addresses this goal. On a regular basis, the Center engages its faculty and community partners to support interdisciplinary research. The research team involved with the Community Child Protection Teams involved three academic disciplines as well as representatives from multiple communities and agencies. The Center also has a strong commitment to engaged scholarship and seeks to develop and present information to a wide range of groups.

**Goal 3: Enhance the Success of Our Students through Educational Innovation**

In its self-study, the Center provided numerous examples of how students were engaged in research projects and other activities. Also, during a meeting with the review team, several students described their involvement with Center activities. The learning opportunities fostered by the Center are available to undergraduate as well as graduate students. These opportunities include serving on advisory councils or task forces, receiving professional development training, acting as co-trainers, developing curricula, designing brochures, updating websites, building communication plans, producing videos, conducting evaluation or research, presenting at conferences, and publishing papers.

During the period covered by this study, 22 graduate students and six undergraduates worked at the Center. Of those, 19 were involved in research, six were involved in project support, four
participated in curriculum development. One Master of Social Work student had a field placement at the Center. The Center covered project travel costs for students as well as costs related to conference presentations.

**Goal 4: Enhance Organizational Excellence by Creating a Culture of Constant Improvement**

The Center pursues this goal through several means. First, the Center follows its guiding principles of cultural safety, family leadership, community partnerships, and inclusive planning. The Center has an advisory council, called the Networking Alliance, which has community and academic members as well as representatives from public agencies and universities. The members of the Networking Alliance are nominated for two-year terms by the Center director. The advisory council meets twice a year.

The Center follows an approach of inclusion at Networking Alliance meetings in an attempt to develop co-leadership across faculty, students, and staff. The Center teams faculty and student partners with staff. This approach allows staff to orient faculty and students to the Center’s engagement approach with youth, family, and community collaborators. It also pairs youth and family partners with agency partners and Center staff to encourage respect of each other’s expertise and backgrounds.

The Center team has received a number of awards for their contributions. These awards include the College of Humanities and Social Sciences and University’s Award of Excellence presented to a Center trainer, the WRAL Living the Legacy Award and the college’s Award of Excellence presented to a youth partner, as well as four awards presented to the Center director.

**Goal 5: Enhance Scholarship and Research by Investing in Faculty and Infrastructure**

Over the four-year period covered by this study, the Center has expanded its resources and infrastructure. It has increased staff and grown project funding. The Center has participated in campus, state, and national workshops and conferences. It has grown its technology assets. It has also increased its faculty partnerships through funding of release time and summer salary. Members of the Center team were associated with 50 international, national, state, or community
organizations. The Center director serves on journal boards and has consulted with national and international groups.

**NCSU Review Criteria: Non-Duplication of UNC or State Entities**

Based on the information provided by the Center, the interviews with University officials, and knowledge of the review team of centers at their respective institutions, it is our opinion that the Center for Family and Community Engagement occupies a unique position within NCSU and within the UNC system and does not duplicate existing services.

**Summary and Conclusions**

It is the recommendation of the review panel that the Center is meeting the mission, goals, and original intent when the Center was created and should be continued.
10 Questions That Should Be Addressed During the Center/Institute Review

1. Is current funding of the Center sufficient to continue its operations?

The funding is sufficient but there is no room for error. We recommend the Center actively explore new funding sources. The margins are razor thin. The receipt of additional funding would allow the Center to expand its support of faculty and students.

The Center director is a very special person with a unique skillset. It will be difficult to find someone with her talents to run the Center. She has been effective in bringing in some faculty partners who share her commitments to engaged scholarship.

2. Are support, training, and graduation rates of students consistent with the Center or Institute’s stated goals and objectives?

The number of students seem low but it is difficult to know. One issue is that the Center currently has less than one FTE faculty member. We recommend the Center consider an alternate staffing model where there are 2 FTE faculty. With additional faculty, it would be possible to pursue other funding sources and provide mentorship to faculty and students. The FTEs for faculty could be spread across multiple disciplines, thereby supporting undergraduate, masters, and PhD students.

3. Is faculty participation sufficient to continue the Center or Institute operations?

There is faculty support from several departments including Psychology, Social Work, Public Administration, Economics, Communications, Sociology, and Education. The Center should explore ways to bring these faculty together on a regular basis to explore opportunities. Also, there needs to be a way to track proposals that are submitted as the result of these collaborations even though the Center may not share in any of the indirect costs.

The funding model should become more multidisciplinary and explore engaging from faculty from other schools and colleges in the University. The Center should continue and expand the interaction between Center staff and faculty. The Center should explore funding opportunities from philanthropies. It may consider working with Development to obtain funds from interested parties or to establish an endowment.

4. Are non-tenured faculty being appropriately mentored toward promotion and tenure? Are contributions of junior faculty appropriately recognized by the center or institute and the faculty?

This issue is related to the staffing. There is less than one FTE faculty member funded by the Center. It is difficult for one person to manage projects, pursue funding, and mentor faculty at the same time. We recommend two FTE faculty be funded. This could be for a fixed period of time,
with the level of support declining each year with the understanding that these faculty explore and achieve funding from other sources.

5. **Is the quality of scholarly activity by faculty, professional staff, and students reflected in its outputs?**

The quality is high. The quantity could be increased if there were more staff resources. Collaborations and so on. The Center does provide opportunities for students to publish.

6. **Do current operation of the Center or Institute agree with the most recent Charter, goals, and objectives of the Center or Institute?**

The operations align with the University’s strategic mission. The activities of the Center align with the mission of the Center. The Center does not duplicate any other UNC Center or any activities of NC DSS.

7. **Does the financial audit and professional evaluation demonstrate that the Center or Institute is being managed properly?**

NA

8. **Are required matching funds, stat-up funds, or capital equipment still appropriate and available?**

We recommend that the University provide support up to 2 FTEs for a fixed period of time. See the response to Q4. Also explore ways to monetize the training; offer fee-based professional development.

9. **Is space required for operation of the Center or Institute available?**

We recommend consolidation of space or have more designated times and places for everybody who works on campus to be together. Staff provides statewide training and resides in different parts of the state.

10. **Are the Center or Institute clients being served?**

Yes. We recommend that the Center collect better evaluation data to measure the impact of their training and services. These data could be used to pursue additional funding.
The Center Review Panel (“Panel”) conducted a comprehensive review of the four most recent years of operation of the Center for Family and Community Engagement (CFACE). At my request, the review was scheduled one year earlier than normal because I am retiring at the end of June 2018.

The Panel reviewed the Center Report that documents CFACE’s accomplishment and sets forth prospects and directions for the future. On November 10th, 2017, the Panel conducted interviews with key stakeholders, including university and college leadership, Center director and staff, Networking Alliance (advisory council) members, faculty partners, and student partners.

The Panel provided a report of their findings and assessed CFACE’s performance against the university’s evaluation criteria. The Panel recommended continuance of the Center for Family and Community Engagement (CFACE) and concluded that CFACE met each of the criteria for continuation. The Panel identified that CFACE’s work aligns with NC State’s five strategic goals and iterated that CFACE “occupies a unique position within NCSU and within the UNC system and does not duplicate existing services.” I appreciate that the Panel commended my achievements as Center Director.

The Panel set forth a series of recommendations to strengthen CFACE even further. These recommendations are quite timely and helpful as CFACE transitions to a new director. Below I address the Panel’s recommendations.
1. Expand Funding Sources

The Panel concluded that the current funding of the Center is “sufficient” but recommended expanding funding sources. I have identified a faculty member to replace me as Principal Investigator on our major and long-term funding source, the NC Department of Health and Human Services, Division of Social Services. This will ensure continued funding for CFACE at current levels.

Beyond current grant funding, a new Center Director will bring their own areas of expertise, and this will support diversification of funding sources.

As discussed further under Point 2 below, expanding faculty FTE with the Center will incentivize researchers to bring grants through the Center while ensuring that their home departments are provided the funds to cover their faculty’s time with the Center.

The addition of more faculty and more grants heightens the administrative load on the Center. To manage this expanded load, the Center Manager needs to move from the current .25 to .50 FTE on Center work with the remainder paid from project funding. This would make it possible for CFACE to meet grant requirements such as reporting while assisting faculty to focus on the scientific aspects of the work. In the long-term, the Center would benefit from an operations director, who can focus not only administration but also on securing donations and development of an endowment.

I should also note that CFACE this year is expanding research and public service opportunities that are funded through the Graduate Extension Assistantship and Graduate Student Support Plan as well as CFACE funds (e.g., paid internship, paid research assistantship). Continuing in this direction will support students and enhance Center resources.

2. Increase Faculty FTE

CFACE has worked to include more faculty partners, and their contributions have been invaluable to enhancing the Center’s research and public service. Nevertheless, I fully agree with the Panel’s recommendation that the faculty FTE dedicated to CFACE should be raised from the current .75 FTE to 2.0 FTE. As the Panel suggests, the College’s amount of support for the faculty (other than the Center Director) could gradually decrease as the involved faculty build up grants, fees for services, and other Center resources.

The Panel points out that the increased FTE would make it possible for CFACE to increase its mentorship of faculty and student partners, its funding streams, and its publications. Having 2.0 faculty FTE would make it possible to spread the faculty FTE
over multiple disciplines, thus, encouraging interdisciplinary scholarship necessary for addressing complex problems and meeting expectations of potential funders.

With the Center Director at .75 FTE with CFACE, this would leave room for two faculty at .5 FTE and a third faculty member at .25 FTE. This would not disadvantage home departments who would receive reimbursement for their faculty’s time and provide community-engaged opportunities for the faculty and their students.

3. **Common Space for Involved Faculty, Staff, and Students**

The Panel recommended either consolidating CFACE’s space or determining ways of bringing together faculty, staff, and students on a regular basis. CFACE staff pose a particular challenge because they reside and work in different parts of the state. CFACE has used various online technologies to support communication among the staff.

CFACE can increase communication among faculty, staff, and community members through capitalizing on collaborative conference rooms and faculty research commons in the University libraries. This would be a means of spurring community-university collaborations and can be used to smooth the transition from the current to future Center Director. Another means of furthering collaboration is tapping into existing academic forums or creating interdisciplinary forums related to the Center’s work.

4. **Enhance Evaluation of Training and Service**

CFACE currently tracks its services and levels of satisfaction with this work. Having ways of assessing their impact would serve the dual purposes of improving services and using the evaluation data to pursue other funding. As Panel observed, this would be a way of profiling CFACE’s work and securing clientele beyond the state.

CFACE could also track the impact of the Center work on its faculty and student partners through systematically seeking their feedback on the experience. The data would help CFACE enhance their involvement and attract new faculty and student partners. The Center is already determining ways to collect these data during onboarding and exiting.
MEMORANDUM

TO: Alan H. Rebar  
   Vice Chancellor for Research, Innovation and Economic Development

FROM: W. Randolph Woodson  
       Chancellor

SUBJECT: Recommendation to continue the Center for Integrated Fungal Research (CIFR) under Regulation 10.10.04

DATE: January 22, 2018

In response to your Memorandum dated January 16, 2018, authorization is hereby granted to forward the request to continue the Center for Integrated Fungal Research (CIFR) to the Board of Trustees for approval.

WRW/mh

cc: Richard Linton, Dean, College of Agriculture and Life Sciences
    Ignazio Carbone, Director, CIFR
    Mladen Vouk, Associate Vice Chancellor, Research Development
    Jonathan Horowitz, Assistant Vice Chancellor, Research Administration
    Larisa Slark, Senior Administrative Coordinator – Centers and Institutes
MEMORANDUM

TO: W. Randolph Woodson
    Chancellor
    NC State University

FROM: Alan H. Rebar
      Vice Chancellor for Research, Innovation and Economic Development
      NC State University

SUBJECT: Recommendation to continue the Center for Integrated Fungal Research (CIFR) under Regulation 10.10.04

DATE: January 16, 2018

In accordance with Regulation 10.10.04, the Office of Research, Innovation and Economic Development completed a Periodic review of the Center for Integrated Fungal Research (CIFR) for the period 2012-2016.

The Report delivered by the Review Committee strongly supports continuation of the Center, and concludes that involvement of Center faculty and students is strong and leadership of the Center is passionate. Center research programs have expanded to encompass faculty in four NC State colleges, a graduate student-training grant is within reach and the Center spawned an industrial consortium that has engaged major agricultural companies in Research Triangle Park.

The Report includes a number of recommendations, including steps to ensure that the Center is on sound financial footing, improvements to the visibility of the Center and increasing the Center’s emphasis on patenting and licensing of IP. The recommendations of the Review Committee were accepted by the Center and the College of Agriculture and Life Sciences (CALS), and CALS requests continuance of the Center.

The Office of Research, Innovation and Economic Development and the Provost endorse the request to continue CIFR as a university Center as sanctioned by the Board of Trustees, and I request your approval of this recommendation.

AHR/mh

cc: Richard Linton, Dean, College of Agriculture and Life Sciences
    Ignazio Carbone, Director, CIFR
    Mladen Vouk, Associate Vice Chancellor, Research Development
    Jonathan Horowitz, Assistant Vice Chancellor, Research Administration
    Larisa Slark, Senior Administrative Coordinator – Centers and Institutes
Center for Integrated Fungal Research (CIFR)
On-Site Review, 2-3 August 2017

Meredith Blackwell, Louisiana State University
John Perfect, Duke University
Harald Scherm, University of Georgia

Overall mission and goals
The mission of the CIFR is to combat fungal disease, work on industrial applications of fungi with industry representatives, improve genomic research techniques through collaborations with industry and technological partners, educate the general public, and train and teach students, post-doctoral fellows and visiting scientists in fungal biology and genomics. Its current focus area is the understanding of plant-microbe-soil interactions in relation to the biotic and abiotic environment. Clearly, during the last few years CIFR has seen a change in its focus but leadership and membership appears engaged and committed. The Executive Committee is very passionate about CIFR and has put their heart and soul into the refocusing effort. With continuing support from CALS and industry, the CIFR appears on target to meet its goals over the next five years and should be encouraged and helped as much as possible. CIFR’s ability to embrace new research opportunities, engage new members, and leverage industry support can serve as a model for other interdisciplinary units at NCSU.

Specific responses to Center/Institute review questions:

- The CIFR is on track and has determined a new direction for the next five years. Although the timing of this review appears to have caught CIFR in the middle of its redirection, it appears to be very competitive in its area both nationally and internationally. CIFR is on the verge of sustaining financial success, but financial help from the colleges and university is recommended for specific purposes such as sponsoring symposia/retreats, other forms of publicity, and internal regular meetings of the various members and students of CIFR to further build an esprit de corps.

- Faculty involvement of most CIFR members is strong, and enthusiastic participation was clear in discussions with the faculty members. Most were pleased especially in the importance of CIFR in acquiring positions and recruiting
new colleagues. CIFR collaborations now go well beyond the CALS and include colleagues in Engineering, Mathematics, and the Veterinary School.

- The senior faculty offers guidance to a committed group of graduate students. Resubmission of the NRT training grant and its potential success will be an important asset and focal point to CIFR. Several faculty members have published peer-reviewed teaching publications and won teaching awards. Students are strongly encouraged to publish their research. Placement of graduate students in industry appears to be strong based on anecdotal information, and two graduates are in tenure-track academic positions. Detailed placement information for recent graduates or postdocs was not provided, and it will be helpful that CIFR tracks their placements in the future.

- Personal knowledge of some faculty and the tenured status for all except a few new hires is evidence that the junior faculty members are well mentored. Publications and funding are generally good.

- CIFR has enthusiastic leadership that offers appropriate guidance, as they also keep their individual research programs very active. The four-member advisory committee was a useful addition.

- Most CIFR faculty members are publishing papers of good quality at an appropriate rate. Their grants are good to excellent but it may be that more submittals are needed (we did not have this information). IP generation (patents) has been limited to primarily one faculty member. The training grant will be essential in training additional students and helping to finance continuing activities such as graduate student-centric symposia and high-powered speakers that will not only serve the training mission, but also help to better brand CIFR. The Center still is centered in mycology but its growth into areas of microbiome, and microbial interactors and soil shows insightful and leading-edge growth.

- The CIFR scope has appropriately broadened to include other microbes in addition to fungi, but it continues to occupy a unique position among centers in CALS.

- Although not a purview of the committee, all evidence indicates CIFR accounting is in good order.

- Start up funds for new faculty will be supplied by central administration. Existing CIFR personnel has the necessary equipment for their work at this time. They have had access to funds from several departments whose faculty members use the facility to replace an autoclave and a few less expensive items. In addition CIFR has taken advantage of its center designation to use state and university
opportunities to acquire larger equipment including DNA sequencers. No additional computing facilities are necessary at this time.

- CIFR has adequate space currently with good lab and office facilities for a new hire. The facility layout is conducive to collaborative interactions. In addition, there is some area near faculty offices that could be used to provide space for other purposes such as space for graduate students and postdocs.

**Broader questions regarding the role and function of CIFR**

**Does the Center have a clear focus that is different from that of other NCSU units?**

CIFR has a relatively broad mission that includes the understanding of interactions between microbes, plant health, and the environment. Its focus has evolved from advancing fungal genomics to understanding and being able to predict plant-soil-microbe interactions in relation to other biotic and abiotic factors. There remains a strong emphasis on quantitative aspects and toolkit development. CIFR builds a bridge between faculty in Entomology & Plant Pathology and Plant & Microbial Sciences, and departmental leadership finds the CIFR to be a value-added Center to their own mission and infrastructure.

**Does the Center add value beyond what could be accomplished simply by collaboration among colleagues?**

CIFR has been a good platform for collaboration among faculty from different departments and colleges, resulting in productive outputs as measured with traditional metrics such as grants and publications. Recently, there has been a stronger focus on truly synergistic activities such as the large NRT proposal, the formation of the PSMCC consortium, and the envisioning of the interactome faculty position. This new direction should be strongly supported by central administration.

**Is the Center on a solid financial footing?**

The financial future of CIFR is somewhat uncertain. Competitive grantsmanship to individual faculty or faculty teams has been very good. PSMCC appears to be an excellent mechanism to raise additional funds for research as well as operating dollars for the Center and the salary of the Program Manager. In fact, the Program Manager is outstanding and a substantial part of PSMCC success. PSMCC also satisfies other important factors: (1) it helps CIFR to be greater than the sum of its parts; (2)
it extends their discovery platform to potential implementation science; (3) it makes excellent contacts for students to reach industry positions. However, the PSMCC is relatively young and the extent to which income via the consortium can be increased or sustained in the longer term is still unknown. Given CIFR’s new direction and activities, and the need to build a stronger outward-facing brand which requires activities such as retreats or symposia, continued limited-time funding by central administration would appear to be a very good investment.

**Does the Center have clear milestones and mechanisms to measure progress toward accomplishments of goals?**

CIFR’s 2013 strategic plan lists a number of “indicators of success” and bullet points of “what a successful CIFR looks like.” However, no reporting against these metrics was done in the self-assessment report. One indicator of success, “establish industry consortium” has been successfully accomplished, and another, “obtain training grants” has come within reach. CIFR should continue to set clear goals and milestones, and critically and regularly assess progress toward them.

**Are there new opportunities for the Center?**

- Stronger emphasis on or marketing of CIFR’s strength in data science pertaining to plant-microbe-environment interactions.
- Increased fundraising through IP, workshops, and fee-for-service activities.
- New Plant Sciences Building near CIFR facility will provide additional opportunities for collaboration and member recruitment.
- With an enlarging faculty and need to re-establish brand, the timing is correct for more symposia, regular meetings for science and interactions with students and faculty.
- Students appear to be mentored well but could use more attention to make them feel more linked to the CIFR.

**What are the threats to the Center?**

- Close to being at critical mass in terms of membership; what happens if one or two key faculty leave NCSU? Is there a succession plan for leadership?
- There appears to be a lack of name recognition and brand awareness about CIFR both on and off-campus. Building this brand through activities such as symposia, retreats, news stories, and high-level successes (the NRT would be a game-changer) should be an important direction for CIFR.
• Internal communications should be increased with periodic news and announcements sent out by email to all participants including postdoctoral associates, research associates, and students.

• Targets, milestones, and means to assess progress toward goals appear to be underdeveloped.

• The PSMCC funding model appears to be working, but not yet fully proven in the longer term. Continued support from central administration to support CIFR’s momentum appears to be warranted.

In sum, CIFR has been acting as a Center which is greater than the sum of its parts. Three areas of conceptual attention for this Center are: (1) the consortium with industry; (2) the training grant; (3) extension and acknowledgement of the brand to students and faculty. The consortium should be encouraged to grow. The training grant should be resubmitted. The local infrastructure needs attention to carefully build the CIFR brand both locally, regionally, nationally and internationally. It is recommended that as it re-establishes itself, minimal resources from the colleges could be directed to it for infrastructure growth. The potential for academia-private industry collaborations, the ability to create CIFR fellows or house international scholars, and the use of CIFR to help recruit new faculty are real and/or potential future outcomes. The ability to adapt to changing scientific environments has been excellent without giving up on its fundamental focus of fungal biology and evolution; hence, CIFR’s mission is still intact.
Center for Integrated Fungal Research (CIFR)
Response to On-Site Review

Director: Ignazio Carbone
Associate Director: Marc Cubeta
Executive Committee: Peter Ojiambo, Amy Grunden, Owen Duckworth
Program Manager: Megan Andrews

Overall mission and goals
The members of CIFR thank the review team for their time and dedicated effort. Their review has eloquently captured the current state of the Center and provided substantial constructive advice for further improving CIFR as we move forward. We appreciate their insightful comments and kind words.

Specific responses to Center/Institute review questions
• We appreciate the recognition that financial support is needed for specific activities necessary to build the CIFR community, increase recognition of the CIFR brand and hold regular Center meetings.
• CIFR appreciates the enthusiastic participation of its faculty and is looking forward to welcoming new members to the Center. The CIFR faculty Biochemical Interactome position has been filled, and we anticipate that the new faculty member will facilitate additional collaboration between and among existing CIFR faculty, as well as aid in continuing to build collaborations outside CALS. CIFR will continue to work towards the goal of balancing the strong CALS core with additional members from COS, CVM, and COE.
• Detailed placement information for graduate students and postdocs have been compiled for the five years covered in this review and we will include this information in future reports.
• We anticipate additional IP generation through both CIFR and PSMCC over the next five years. The increased communication with industry scientists over the past two years has emphasized the potential value of patenting and/or licensing products originating from laboratory research and software developed through CIFR laboratories. Dr. Carbone has recently submitted the information needed to begin the process for patenting a biological control agent and licensing data analytics software.
• Broadening of CIFR’s scope, without changing our mission, has allowed the Center to more effectively address the core research questions surrounding fungi. Fungi continue to be the focus of the Center for Integrated Fungal Research, but the discoveries of the inseparable and complex connections of microbiomes and their host organisms, as well as the impact of dynamic abiotic factors, has shown that we must look at the whole system to better understand the roles of fungi.
• We appreciate the insightful comments that having a training grant will not only be essential to training and financing our graduate students, but will
also help to better brand the Center. CIFR fully intends to resubmit the NSF-NRT training grant in early 2018, and will continue to actively seek additional similar opportunities.

**Broader questions regarding the role and function of CIFR**

**Does the Center have a clear focus that is different from that of other NCSU units?**

We appreciate the review team’s recognition of CIFR’s value as a Center. As we build name recognition, expand membership, and grow the PSMCC, we anticipate even more synergy to develop. Broader expertise is necessary to fulfill the goal of CIFR to integrate all aspects of fungal research, and this larger group will be able to tackle problems well beyond the scope of what can be accomplished within a single discipline.

**Does the Center add value beyond what could be accomplished simply by collaboration among colleagues?**

CIFR will continue to improve our role as a platform for collaboration among faculty from different departments and colleges. In particular, interdisciplinary and multi-CIFR faculty research grants will be strongly encouraged, in addition to training grants, the new biochemical interactome position, and continuing PSMCC activities. We appreciate the review team’s support of these activities.

**Is the Center on a solid financial footing?**

We appreciate the review team’s recognition of our ongoing efforts to increase funding for CIFR, particularly through the PSMCC mechanism. We agree that PSMCC is in the early stages of development and cannot yet be considered a stable source of funds. Additionally, funds brought in through PSMCC are restricted to use for consortium-specific research and activities, and are not available for all of the diverse range of Center needs. The review team’s assessment that activities such as retreats and symposia are needed to gain more brand recognition for the Center (rather than just the portion of the Center represented by the Consortium) is accurate and developing these activities will be a major focus over the next five years.

**Does the Center have clear milestones and mechanisms to measure progress toward accomplishments of goals?**

As the review team has already noted, CIFR is still in the midst of fulfilling the vision of the reorganized Center as outlined in 2013. Much of the focus of the past three years has been establishing the industry-supported consortium and developing the synergistic collaboration needed to begin submitting training grants. As we move forward, we agree that CIFR needs to clearly set goals and milestones, and regularly assess progress. We have now established an external advisory board, which will
meet twice a year. We are also in the process of creating a more vibrant community within CIFR through regular meetings, research symposia, and other activities. With input from both the external board and the current members of the Center, we will define and articulate a set of milestones and metrics by which we will gauge Center progress. CIFR will assess and report on these milestones, those outlined in the 2013 plan and any newly developed milestones, in the annual report. This annual report will be presented to our external advisory board, as well as submitted to the University.

**Are there new opportunities for the Center?**

- We appreciate the suggestion to place more emphasis on showcasing CIFR's existing strength in data science relating to the plant-microbe-environment interactions and will endeavor to make this aspect of CIFR more visible.
- CIFR is actively looking for opportunities to license intellectual property, generate fee-for-service opportunities and other methods of generating funds for the Center. This includes pursuit of potential cross-college and industry partnership projects through the Center.
- We agree that involvement in and proximity to the Plant Science Initiative building will provide many opportunities for collaboration and recruitment.
- The review team is absolutely correct that now is the time to establish regular meetings for faculty, students, postdocs, and staff affiliated with CIFR to reinvigorate the Center community and promote collaboration. Establishing annual symposia, special seminars or seminar series will contribute to both building CIFR's brand and keeping CIFR's members connected.
- We recognize the need to more directly include students and postdocs in the Center. This will be done through monthly CIFR meetings, internal communications, symposia, and seminars. We are actively soliciting input from the broader CIFR membership, including students and postdocs, as we determine the direction to take with regular monthly meetings. We are also considering implementing a CIFR student/postdoc leadership team to facilitate their involvement in the Center and keep lines of communication open.

**What are the threats to the Center?**

- CIFR is strategically increasing the number of faculty - two new members have been welcomed to the Center in 2017 and the CIFR-based Assistant Professor position in the Biochemical Interactome has been filled. There has been significant interest in the Center from faculty candidates; CIFR expects to gain several new faculty members from the pool of recently hired faculty at NC State over the next year or two. These additions will stabilize the Center, lessening the potential impact of one or two faculty members leaving NC State, as well as enriching the scientific expertise contained within CIFR.
• The new structure of having an Associate Director and Executive Committee in addition to the Director has provided opportunities for leadership in different CIFR activities and is building institutional knowledge of CIFR within the program. Center Directors are appointed by University administration, and the Director appoints members of the CIFR Executive Committee for a three-year term, which can be renewed once for a total of six years. We agree that developing a succession plan for leadership should be a topic of discussion by the CIFR team.

• We agree that CIFR needs greater name recognition both on and off campus. Much of our marketing focus has been put into recognition of the Plant Soil Microbial Community Consortium and we agree that it is now time to focus some of that marketing energy towards the Center itself. In the last year, we have reorganized the CIFR website, added a separate but linked website for PSMCC, and are updating them regularly with faculty and center news. We plan to expand this by including student and postdoc highlights and news, adding a monthly newsletter, and hosting seminars and symposia. The recent addition of a CIFR faculty position and our involvement in several additional faculty searches has increased awareness of the Center with newly arriving faculty. As a Center, we will continue to submit proposals for training grants and develop interdisciplinary multi-CIFR faculty directed research proposals.

• We agree that it is imperative to include students, postdocs, and staff in regular CIFR communications, and a monthly newsletter has been in the works for the past few months. The current website, newsletter, and monthly group meetings will greatly increase the inclusion of all our CIFR members.

• With the assistance of our newly formed External Advisory Committee and the full contingent of active and engaged CIFR faculty, the Center will work towards more fully developing our targets, milestones and progress assessments.

**CIFR Funding Over the Next Five Years**

CIFR leadership agrees with the review committee that continued support is warranted and will be meeting with administration to make a formal request. CIFR will continue to pursue multiple mechanisms to obtain funding for the Center, as outlined in the CIFR 5 Year Self-Study. These include interdisciplinary research grants, training grants, PSMCC membership fees, licensing fees, and revenue from service projects. However, these will all require time to be successful.
Designation of Time Limited Option for Distinguished Professorships

**Background:** Donors who endow a distinguished professorship at NC State University may elect to pursue matching funds available through the state’s Distinguished Professors Endowment Trust Fund (DPETF). In accordance with state statutes, as well as University of North Carolina system and NC State University policies, the NC State University Board of Trustees (BoT) is authorized to designate that endowed distinguished professorships seeking DPETF matching funds may be time limited.

We request this designation from the BoT when a donor agreement indicates intent that a distinguished professorship be awarded, or potentially awarded, at a rank other than professor (i.e. assistant, associate professor) and/or for a period other than an individual’s full career.

This designation provides the university with the maximum flexibility in awarding the distinguished professorship over time. Still, the overwhelming majority of NC State’s distinguished professorships are offered to professors for the duration of their career at NC State.

**Recommended Action:** We request designation of the following distinguished professorships which may be time-limited:

1. William K. and Ann T. Collins Distinguished Professorship in Tobacco Research & Extension, College of Agriculture and Life Sciences, $2M endowment
2. M. C. Dean, Inc. Distinguished Professorship in Electrical and Computer Engineering, College of Engineering, $1M endowment
3. Severn Peanut Company/Hampton Farms Distinguished Professorship in Peanut Breeding, College of Agriculture and Life Sciences, $2M endowment
4. Melanie S. Steele Distinguished Professorship in Medicine, College of Veterinary Medicine, $1M endowment
5. David H. Murdock Distinguished Professorship #2, College of Agriculture and Life Sciences, $1M endowment
6. David H. Murdock Distinguished Professorship #3, College of Agriculture and Life Sciences, $1M endowment
7. William H. Culpepper, Jr. Distinguished Professorship in Aquatic Weed Science, College of Agriculture and Life Sciences, $1M endowment
8. Cirrus Logic, Inc. Distinguished Professorship in Electrical and Computer Engineering, College of Engineering, $1M endowment
9. Kady M. Gjessing and Rahna M. Davidson Distinguished Chair in Gerontology, College of Veterinary Medicine, $3.6M endowment

**Policy References:**
UNC Policy 600.2.3 - [Distinguished Professors Endowment Trust Fund](#)
NCSU Policy 01.05.01 – [Board of Trustees Bylaws](#)
NCSU Regulation 05.20.17 – [Professorships of Distinction](#)
Conferral of Academic Tenure:

The information regarding conferral of academic tenure is included in the Closed Session Materials – Tab 7.5A.
REPORTS
SG Retreat
Using January 20th as a time to reflect on the year and talk about executing initiatives. This includes identifying the correct administrator to speak with before and during implementation. We’re also using this time to reflect on leadership and long-term goals since a lot of Senators this year are serving in their first-term. We’ll be introducing our new Student Involvement Director, Dr. Jessica Murphy to all of SG and we are absolutely thrilled to have her.

Congressman Price
We are welcoming Congressman Price to campus this semester. His office is coordinating with us to host an informal dialogue to talk about pressing issues like college affordability, recent tax plan, and any initiatives Congressman Price may have. Sarah Stone, Matt Peterson, and Campus Police have been very helpful in logistics and safety for this.

Loyalty Point Games
My Athletics Department Director, Madison Maloney, and her team have been working with NC State Athletics to coordinate Loyalty Point Games where students can get points for attending games besides football and men’s basketball. These points will count like regular points towards the lottery for tickets to football and men’s basketball. This is something that I’m really proud of because I know getting students to some games have been difficult and I think this will be a good incentive for students to go but also show them that we have a fantastic array of teams.

Pride and WOC Villages
Members of both the Senate and Executive Branch are working together to support the efforts to make a Pride Village and Women of Color Village. Success from the Black Male Initiative has prompted members of the NC State Community to rally around a village to support other marginalized communities. The bill has not yet been voted on in Senate.

Accessibility Town Hall
SG is hosting members of DSO, Facilities, and Student Health, to have a conversation on what NC State’s future looks like in terms of accessibility and what students can do to support these initiatives. We’re looking to expand this conversation to be more inclusive of non-visible disabilities.
**Last Lecture Series**
SG’s Traditions Department is in the process of planning it’s newest tradition, the Last Lecture Series, where we invite retiring professors to give a final lecture open to the public. We want to make a tradition to recognize and appreciate all the work our professors do!

**Pack Bleeds Red**
My Vice President Mia Connell and other members of SG have been working together on this initiative to provide free menstrual products on campus. The pilot program began in Talley and is already implemented in the Libraries. We’re looking forward to this program and expanding it further across campus with the help of facilities.

**Meredith College Student Government Collaboration**
We are excited to be hosting Meredith College’s Student Government on Jan. 25th for an SG open house. They will be hosting us later in February. We are excited to begin ties with Meredith and look to inspire our successors to expand collaboration to surrounding Raleigh area schools.

**Government Officials On Campus**
Our Government Relations Department is reaching out to government officials or candidates in the area to come to campus and share their ideas with students. These initiatives like the conversation with Congressman Price are vital to get students involved in local politics because NC State Students make up a large population of voters.

**Elections Prep**
Our Government Relations Department will be working with surrounding political organizations to gather slate-cards, brochures, and flyers about candidates. We are looking to set up a table either in Talley or the Brickyard where students are able to come and take resources about candidates in the area to help them be informed voters.
COLLEGE/DEPARTMENT/PROGRAM NAME: University College, Entrepreneurship Initiative

CERTIFICATE TITLE: Undergraduate Certificate in Interdisciplinary Entrepreneurial Thinking

CIP DISCIPLINE#: 24.0101

PROPOSED OR CURRENT PROGRAM CODE: To Be Determined

CERTIFICATE TYPE: On-campus ☒ Distance ☐ On-campus & Distance ☐

PROPOSED EFFECTIVE DATE: Fall 2017

ATTACHMENTS TO BE INCLUDED:
- Statement of Justification for Program
- Statement of Program Objectives
- List of Revision(s) with Reasons
- List of Program Requirements (use attached Format B)
- Catalog Description of Proposed Certificate
- Number of Certificate recipients in the past Five Years
- Projected Enrollment
- Admission Requirements
- Statement on Other Departments Likely to be Affected and Summary of Consultations with those Departments
- Signature Page
- Routing Form
North Carolina State University

This request has been reviewed and approved by the appropriate campus committees and authorities.

Endorsed By: 

Head, Department/Program  9/13/17

Recommended By: 

Chair, College Curriculum Committee  9/18/17

Endorsed By: 

College Dean  9/19/17

Recommended By: 

Vice Provost, DELTA (if DE degree/certificate)  Date

Recommended By: 

Chair, University Courses & Curricula Committee  10/11/17

Approved By: 

Dean, (DASA or the Graduate School)  10/16/17

Recommended By: 

Dean's Council  11/9/17

Approved By: 

Executive Vice Chancellor and Provost  11/2/17

Approved By: 

Chancellor  12/4/17
Undergraduate Certificate in Interdisciplinary Entrepreneurship
Proposal to UCCC October 2017

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Statement of Justification

- NC State currently has a robust curriculum in discipline specific entrepreneurship courses. Through courses offered in programs such as the Poole College of Management, the Arts Entrepreneurship Program and the Engineering Entrepreneurs Program, students can opt to specialize in entrepreneurship through their major, their senior design course(s) or discipline specific minors. However, NC State currently lacks a mechanism to allow students to receive credit on their transcript for participating in an interdisciplinary cross-section of the entrepreneurship offerings on campus. This undergraduate certificate would allow students the opportunity to combine experiences across at least 3 unique departments in order to gain a broad, interdisciplinary perspective as related to entrepreneurial thinking.

- This undergraduate certificate proposal has been driven by the requests of students, faculty and staff throughout the entrepreneurship programs on campus to fill the gap that exists for students participating in numerous entrepreneurship experiences across campus. The courses, requirements and experiential components have been specifically designed to work with the existing entrepreneurship academic programs such as the Minor in Arts Entrepreneurship, the Minor in Business Administration Entrepreneurship Track and the Major in Business Administration Entrepreneurship Concentration.

- During the 2016/2017 academic year, there were over 30 sections of entrepreneurship courses offered representing at least 15 unique courses and 6 unique course prefixes from colleges such as the College of Textiles, College of Engineering, Poole College of Management and University College. These courses saw student enrollments of over 1300 seats. In addition to these strong numbers, the NC State Entrepreneurs Garage had a student membership of over 800 students during this same academic year, while campus start-up competitions such as the Lulu eGames saw record numbers of almost 200 entries.

Required Resources

- No additional resources will be required at this time in order to implement the Undergraduate Certificate in Interdisciplinary Entrepreneurship. The certificate will be managed through NC State Entrepreneurship in partnership with faculty and staff from all partner colleges and programs that make up the academic elements of NC State Entrepreneurship.

Program Objectives/Outcomes

- Objective 1: Students will demonstrate an entrepreneurial mindset to problem solving in interdisciplinary environments. Measured using required student work samples and responses to required essay questions.
  o Outcome 1: Students will identify, evaluate and develop entrepreneurial ideas from an interdisciplinary perspective.
  o Outcome 2: Students will apply entrepreneurial thinking skills to the development of products, services, technologies and/or organizations with a focus on tailoring plans to the specific needs of the identified target markets.
  o Outcome 3: Students will use valid and reliable data to support and defend entrepreneurial concepts.
Objective 2: Students will acquire a variety of interpersonal skills necessary for success in interdisciplinary entrepreneurial environments. Measured using required student work samples and responses to required essay questions.
  o Outcome 1: Students will be able to actively participate in an interdisciplinary entrepreneurial team environment.
  o Outcome 2: Students will be able to assess, evaluate and describe their own unique strengths and weaknesses as related to an interdisciplinary entrepreneurial environment.
  o Outcome 3: Students will be able to identify key lessons and messages learned from experiential activities as well as integrate those lessons into their lives as entrepreneurial thinkers.

Statement of Program Requirements

Requirement 1 of 3: Choose 12 credit hours from the interdisciplinary course options below. No more than 2 courses counting towards the Undergraduate Certificate in Interdisciplinary Entrepreneurship may come from the same course prefix. Students will be required to submit work samples from their chosen certificate courses to an online portfolio via the Moodle Certificate Management website. The Moodle site for documenting student completion of certificate requirements is being modeled after the NC State Office of Faculty Development Certificate of Reflective Teaching.

- EI 201 Exploring Interdisciplinary Entrepreneurial Thinking (3cr)
- EI 331 Interdisciplinary Entrepreneurial Thinking I: Skills and Planning Basics (3cr) **EI 201 is a prerequisite for this course
- EMA 110 Introduction to Arts Entrepreneurship (3cr)
- EMA 365 Foundations in Arts Entrepreneurship (3cr)
- EMA 370 Practical Arts Entrepreneurship (3cr)
- MIE 310 Introduction to Entrepreneurship (3cr)
- MIE 410 Business Opportunity Analysis (3cr) **MIE 310 is a prerequisite for this course
- MIE 412 Finance and Accounting for Entrepreneurs (3cr) **MIE 310 is a prerequisite for this course
- MIE 413 New Venture Planning (3cr) **MIE 310 is a prerequisite for this course
- MIE 416 The Legal Dynamics of Entrepreneurship (3cr) **MIE 310 is a prerequisite for this course
- MIE 419: Entrepreneurship Practicum (3cr) **MIE 413 is a suggested co-requisite for Certificate participants
- FTM 310 Entrepreneurship & New Product Development in Textiles (3cr) **Students must have junior standing in order to enroll in this course; restricted to College of Textiles students in FTM, FTD or TT degree programs
- ECE 482/MAE 482: Engineering Entrepreneurship and New Product Development I (3cr) **Departmental approval required
- ECE 483/MAE 483: Engineering Entrepreneurship and New Product Development II (3cr) **Departmental approval required
- PS 203 Introduction to Nonprofits (3cr)

Please note that ECE 383 will be added to the Certificate options once it has received 3 credit hour status. In addition, members of the NC State Entrepreneurship faculty will work with programs, colleges and departments throughout campus to add new entrepreneurship courses that will become part of the certificate options when possible.
Requirement 2 of 3: Choose at least 1 Intensive Experience from the options below. Please note that Intensive Experiences must be completed after declaring your intent to complete the Certificate in Interdisciplinary Entrepreneurship.

- Complete the Andrews Launch Accelerator program with the NC State Entrepreneurship Clinic
- Complete one semester as a volunteer with the NC State B Corp Clinic in an entrepreneurial environment
- Complete one full year of membership in the Albright Entrepreneurs Village
- Complete at least 15 Entrepreneurship Skills Workshops offered through NC State Entrepreneurship (To ensure that minimum standards for an Intensive Experience are met, acceptable workshops will be designated as approved for Certificate Intensive Experience)
- Complete the Social Innovation Fellows Program
- Additional Intensive Experiences may count towards the Undergraduate Certificate in Interdisciplinary Entrepreneurship. Please contact the Certificate Director for prior approval of independent Intensive Experiences such as internships, additional capstone courses, or other proposed projects including business development as an NC State Entrepreneurs Garage member, participation in the StartingBloc Institute, etc.
- Approved Intensive Experiences may be added to this list as they become available and are approved by members of the NC State Entrepreneurship Faculty Advisory Council.

Requirement 3 of 3: Complete and submit your responses to the required essay questions during your final semester of the Undergraduate Certificate in Interdisciplinary Entrepreneurship:

Essay Question Options (to be updated as deemed necessary by the members of NC State Entrepreneurship)

- Explain and describe how your intensive experience utilized the interdisciplinary skills, knowledge and experiences gained in your chosen entrepreneurship courses.
- Describe your personal growth and development as an entrepreneurial thinker during your work with the Undergraduate Certificate in Interdisciplinary Entrepreneurship. Consider topics such as leadership, communication, team participation, creativity, self-awareness, etc as you complete this essay.
- How do you currently plan to apply entrepreneurial thinking to your plans after graduation?
- Please list any other entrepreneurial activities and/or accomplishments. Participation in the NC State Entrepreneurship Garage, the NC State Entrepreneurship Clinic, trips and tours, additional courses, additional entrepreneurial experiences, competition participation, etc.

Successful completion of the Undergraduate Certificate in Interdisciplinary Entrepreneurship requires a 2.0 GPA in the coursework taken to fulfill the certificate requirements as well as at least a 2.0 overall GPA. Please note that no more than 2 courses may count jointly towards the Undergraduate Certificate in Interdisciplinary Entrepreneurship and any other major/minor related to entrepreneurship.

Description

- The Undergraduate Certificate in Interdisciplinary Entrepreneurship has been specifically designed to be applicable and accessible to students in all areas of study at NC State. Students who will find this certificate most engaging will be those students interested in turning ideas into action through starting ventures, working in a startup environment or applying entrepreneurial thinking skills to an existing organization. This certificate differs from the entrepreneurship minors available on campus by giving students a broad overview of the
entrepreneurial process from an interdisciplinary perspective. Students will have the opportunity to explore entrepreneurial thinking in the arts, the social entrepreneurship sector, non-profits, for profits, start-ups, growth ventures, B-Corps, and other areas of interest. Students who complete the Undergraduate Certificate in Interdisciplinary Entrepreneurship will specifically benefit from the interdisciplinary nature of instructors, peers, teams, mentors, materials, activities, opportunities, community partners and alumni.

Projected Enrollment

- Within 5 years of launching, we expect to award at least 50 Undergraduate Certificates in Interdisciplinary Entrepreneurship each year. If additional course options become available, this number should increase substantially.

Admissions Requirements

1. Declare your intent to complete the Undergraduate Certificate in Interdisciplinary Entrepreneurship by filling out the Certificate Declaration Form via the NC State Student Services website. This MUST be completed prior to the beginning of your senior year.
2. Once you have been accepted into the certificate program, a certificate administrator will follow up with you via email to acknowledge receipt of your declaration form and to provide instructions for accessing the Undergraduate Certificate in Interdisciplinary Entrepreneurship website via Moodle.
3. As you complete work towards the certificate, fill out and submit the appropriate information via Moodle to track your progress. This will help you establish a robust portfolio of your experiences in the Undergraduate Certificate in Interdisciplinary Entrepreneurship.
4. Submit your request to complete the Undergraduate Certificate in Interdisciplinary Entrepreneurship prior to November 15/April 15 of your graduating semester.
5. Contact Jennifer Capps at jennifer_capps@ncsu.edu or at 919-515-4530 with any questions.

Statement on Other Departments/Programs Likely to be Affected and Summary of Consultations:

The Undergraduate Certificate in Interdisciplinary Entrepreneurship will be offered through NC State Entrepreneurship. Specifically, groups that will be impacted include those offering courses and/or co-curricular opportunities that fulfill certificate requirements.

- EI courses, NC State Entrepreneurs Village, NC State Entrepreneurs Garage
  - Consultation from Jennifer Capps, Director of Academic Programs, NC State Entrepreneurship Initiative
  - Consultation from Dr. Tom Miller, Senior Vice Provost for Academic Outreach & Entrepreneurship
  - Consultation from Dr. Carrie Zelna, (filling in for Dr. Bret Smith) University College
- EMA courses: University College
  - Consultation from Dr. Gary Beckman, Director of Entrepreneurial Studies in the Arts
  - Consultation from Dr. Daniel Monek, Director of Music Department
  - Consultation from Dr. Carrie Zelna, (filling in for Dr. Bret Smith) University College
- MIE courses, NC State Entrepreneurship Clinic, B Corp Clinic: Poole College of Management
  - Consultation from Lewis Sheats, Director of NC State Entrepreneurship Clinic
  - Consultation from Jessica Thomas, Director of Business Sustainability Collaborative
  - Consultation from Dr. Tamah Morant, Associate Dean for Undergraduate Programs
• ECE/MAE courses: College of Engineering
  o Consultation from Marshall Brain, Director of Engineering Entrepreneurs Programs
  o Consultation from Dr. Jerome Lavelle, Associate Dean of Academic Affairs
• FTM course: College of Textiles
  o Consultation from Dr. A. Blanton Godfrey, Faculty FTM 310
  o Consultation from Dr. Jon Rust, Associate Dean for Academic Programs
• PS course and Social Innovation Fellows Program: College of Humanities and Social Sciences
  o Dr. Deanna Dannels, Associate Dean of Academic Affairs
  o Dr. Richard Clerkin, Executive Director of Institute for Nonprofits
  o Dr. Trace Reid, Political Science Department Chair
• Office of Institutional Research and Planning SCRT
• Summary of results: The following summarized discussion points were brought up during the consultation process. Each point was addressed by adding additional content to the proposal and/or by an email response. Please see the attached documents for full details of each consultation conversation.
  o How will outcomes be measured and by whom?
  o Are the outcomes worded appropriately to meet the demands of the certificate?
  o Can courses be double counted towards multiple degrees/minors/certificates? If so, which courses can be double counted?
  o Will students have enough space in their academic schedule to complete the required courses?
  o Will this compete with other degree programs?
  o As the certificate program grows, more resources may be required in order to keep up with demand.

 Administration Details

• A Faculty Advisory Council for NC State Entrepreneurship will be created to represent the campus partners in reviewing academic elements, academic rigor and recipients of the certificate program. This council will include representatives from as many partner programs as would like to participate including the Poole College of Management, College of Textiles, Institute for Non-Profits, Arts Entrepreneurship Program, Social Entrepreneurship Initiative, Engineering Entrepreneurs Program, University College and others as we grow. While we believe that the individual membership will fluctuate over the years, the core council partners will remain represented. The goal of the Faculty Advisory Council would not only be to represent the best interests of the certificate, but also to collaborate across courses, be aware of the course content and programs throughout NC State Entrepreneurship and to assist in the collection of data for both reporting and research purposes.
• Faculty Advisory Council members will be representative of the colleges and programs contributing to the certificate components. An initial cohort would include representatives from the Poole College of Management, College of Engineering, University College, College of Humanities and Social Sciences and College of Textiles. Additional representatives will be added as the certificate grows.
• In addition to the Faculty Advisory Council oversight, the Certificate Director will continue to work closely with the DASA Office of Assessment team to ensure that outcomes are monitored, assessed and tracked in accordance with University standards.
The official Certificate Director responsible for day to day certificate management and coordination of the Faculty Advisory Council will be Jennifer Capps, NC State Entrepreneurship, jennifer_capps@ncsu.edu, 919-515-4530

DASA will be the academic home for this certificate.
## Appendix: Consultation Schedule

<table>
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<tr>
<th>Department</th>
<th>Name</th>
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<td>EI, Village, Garage</td>
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<td>Lewis Sheats</td>
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<td>Jessica Thomas</td>
<td>B Corp Clinic</td>
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<td>EEP</td>
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<td>Aug 15, Aug 22</td>
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### Change/Edit Schedule

1. Add Dr. Trace Reid, political Science Department Chair to consultation list per Dr. Richard Clerkin request – August 18, 2017
TOPICS OF INTEREST/COMMITTEE DISCUSSION
NC State University Centers and Institutes

Advanced Self Powered Systems of Sensors and Technologies Center (ASSIST)

Director: Dr. Veena Misra

The mission of ASSIST is to transform health informatics, electronics, and biomedical engineering; to develop nanotechnologies for energy harvesting, battery-free energy storage, and ultra-low-power computation/communication; to integrate low power physiological and environmental nanosensors using biocompatible materials; to empower personal environmental and health monitoring.

Animal & Poultry Waste Management Center (APWMC) – website is under construction

Director: Dr. Steven Lommel (Interim Director)

The Animal & Poultry Waste Management Center (APWMC) provides infrastructure, programs, and assistance for innovative basic and applied approaches to animal waste management with emphasis on development of knowledge and waste management options contributing toward the enhancement of North Carolina's and the nation's animal production industries, as well as to the improvement of the environment and quality of life for all citizens.

Bioinformatics Research Center (BRC)

Director: Dr. Fred Wright

The mission of Bioinformatics Research Center (BRC) is to develop and implement methods for the management and interpretation of genomic data, with an emphasis on agriculture, forestry and veterinary medicine.

Center for Additive Manufacturing and Logistics (CAMAL)

Director: Dr. Russell King

The goals of the Center are to provide comprehensive research capabilities in additive manufacturing spanning polymers, metals and ceramics as well as the finishing of these components. In addition, the Center will study the distributed supply chain that will be inherent in these distributed networks of manufacturers.
**Center for Dielectrics and Piezoelectrics (CDP)**

**Director: Dr. Elizabeth C. Dickey**

The CDP aims to develop an international leadership position in the fundamental material science and engineering that underpins dielectric and piezoelectric materials. Innovations in these areas often arise from research advances in materials chemistry, synthesis and processing that enable new materials and device functionality.

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**Center for Educational Informatics (CEI)**

**Director: Dr. James Lester**

The mission of the North Carolina State University Center for Educational Informatics is to lead national efforts to design, develop, and deploy next-generation adaptive learning systems for K-12 education, post-secondary education, and training.

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**Center for Environmental and Resource Economic Policy (CEnREP)**

**Director: Dr. Laura Taylor**

The mission of the Center for Environmental and Resource Economic Policy (CEnREP) is to link economics to science, agriculture and technology to improve public understanding and enhance public and private management of environmental resources.

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**Center For Family and Community Engagement (CFACE)**

**Director: Dr. Joan Pennell**

The Center For Family and Community Engagement (CFACE) is dedicated to advancing safe, healthy, and productive families and communities. It promotes strategies that widen the circle of supports around families and communities. This is accomplished through emphasizing family leadership, community partnerships, cultural safety, and inclusive planning.

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**Center for Geospatial Analytics (CGA)**

**Director: Dr. Ross Meentemeyer**

The mission of the Center is to promote graduate education and research in geospatial science and technology.
**Center for Human Health and the Environment** (CHHE)

**Director: Dr. Robert Smart**

The mission of CHHE is to serve as the nexus of environmental health science research at NC State by providing focus and leadership for interdisciplinary research aimed at understanding how human health, at both the individual and population levels, is impacted by environmental factors and to utilize this understanding to reduce the adverse impacts of environmental factors on human health.

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**Center for Innovation Management Studies** (CIMS)

**Director: Dr. Paul Mugge**

The Center for Innovation Management Studies (CIMS) exists to create, synthesize and disseminate industry-relevant information on innovation management and to develop current and future generations of innovation management researchers and industry practitioners.

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**Center for Integrated Fungal Research** (CIFR)

**Director: Dr. Ignazio Carbone**

The Center for Integrated Fungal Research (CIFR) provides leadership in research and educational objectives in the field of fungal parasitism and mycotoxins aimed to achieve significant breakthroughs in fungal research that will impact human welfare worldwide.

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**Center for Integrated Pest Management** (CIPM)

**Director: Dr. Frank Louws**

The Center for Integrated Pest Management (CIPM) serves a lead role in technology development, program implementation, training, and public awareness for IPM at the state, regional, and national level.

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**Center for Marine Sciences and Technology** (CMAST)

**Director: Dr. David Eggleston**

The principal mission of the Center for Marine Sciences and Technology (CMAST) is to discover innovative solutions to questions and problems in marine systems and provide effective communication of these discoveries, by promoting multidisciplinary studies among research scientists, educators and extension specialists from the participating NC State University colleges, enhancing interaction with other educational institutions and agencies concerned with marine sciences and coastal natural resources, and providing a focal point for citizen contact with NC State University.
State University's marine science and extension faculty.

**Center for Nuclear Energy Facilities and Structures** (CNEFS)

**Director:** Dr. Abhinav Gupta

The mission of the Center for Nuclear Energy Facilities and Structures (CNEFS) is to perform research on innovative but rigorous solutions to problems in nuclear power plants and to transfer this technology to the industry.

**Center for Research in Scientific Computation** (CRSC)

**Director:** Dr. Thomas Banks

The Center for Research in Scientific Computation (CRSC) is a formally recognized, multidisciplinary center administered by North Carolina State University. Its purpose is to foster research in scientific computing and provide a focal point for research in computational science, engineering and applied mathematics.

**Center for Research on Textile Protection and Comfort** (TPACC)

**Director:** Dr. Roger Barker

The Center for Research on Textile Protection and Comfort (TPACC) provides faculty and students with a coordinated environment where interdisciplinary problems related to textile comfort and protection performance can be studied and solved.

**Center for Turfgrass Environmental Research and Education** (CENTERE)

**Director:** Dr. Thomas Rufty

The Center for Turfgrass Environmental Research and Education (CENTERE) promotes research on the turfgrass systems and works on creating a multidisciplinary research 'culture' that develops new, environmentally sustainable management strategies. Emphasis is on basic research to resolve underlying processes that can lead to long-term solutions.

**Center on Genetic Engineering and Society** (GES)

**Directors:** Drs. Jennifer Kuzma and Fred Gould

The GES Center serves as a key regional, national and international hub of interdisciplinary analyses and inclusive dialogue surrounding emerging technologies and society. It will take the lead in using in-depth research and dialogue-based approaches to provide public with rigorous,
trustworthy analyses of how products of GE technologies may impact society and the environment.

**Comparative Medicine Institute (CMI)**

**Director: Dr. Jorge Piedrahita**

The mission of the Comparative Medicine Institute (CMI) is to enhance collaborative, translational, interdisciplinary approaches for the comparative study of animal/human diseases.

**Ergonomics Center of North Carolina (The) (TECNC)**

**Director: Mr. Tim McGlothlin**

The Ergonomics Center of North Carolina (TECNC) is a Public Service Membership Center specifically authorized by the North Carolina General Assembly and established in October 1994 with the original name North Carolina Ergonomics Resource Center through a partnership between North Carolina State University (NCSU) and the North Carolina Department of Labor (NCDOL), Division of Occupational Safety and Health (OSHNC) to assist employees and employers in the prevention of occupational musculoskeletal disorders (MSDs) and the optimization of human-machine work systems design from safety and performance perspectives.

**Future Renewable Electric Energy Delivery and Management Systems Center (FREEDM)**

**Director: Dr. Iqbal Husain**

The Future Renewable Electric Energy Delivery and Management Systems Center (FREEDM) partners with universities, industry, and national laboratories in 28 states and nine countries to develop technology to revolutionize the nation's power grid and speed renewable electric-energy technologies into every home and business.

**General H. Hugh Shelton Leadership Center (SLC)**

**Director: Barbara H. Mulkey**

The mission of the General H. Hugh Shelton Leadership Center is to inspire, educate, and develop values-based leaders committed to personal integrity, professional ethics, and selfless service.

**Golden Leaf Biomanufacturing Training and Education Center (BTEC)**
Director: Gary Gilleskie (Interim Director)

The mission of Golden Leaf Biomanufacturing Training and Education Center (BTEC) is to fuel prosperity by positioning North Carolina as a global leader in bioprocess education and biomanufacturing workforce development.

Industry Research Programs in Forestry (IRPF)

Director: Dr. Marian McCord (Interim Director)

The Industry Research Programs in Forestry Center (IRPF) increases value to landowners and citizens through continuous genetic improvement of forest trees; creates innovative solutions to enhance forest productivity and value through sustainable management of site resources; leads in conservation and domestication of forest genetic resources for sustainable economic, ecological, and social benefits for present and future generations.

Institute for Advanced Analytics (IAA)

Director: Dr. Michael Rappa

The mission of the Institute for Advanced Analytics (IAA) is to promote graduate education in the emerging field of analytics. Its objective is to educate the citizens of North Carolina and beyond in the concepts, methods, software tools, and applications of analytics that have direct and practical relevance to industry.

Institute for Emerging Issues (IEI)

Director: Leslie Boney

The Institute for Emerging Issues (IEI) is a think-and-do tank that convenes leaders from business, government, nonprofit organizations, and higher education to tackle the biggest issues facing North Carolina.

Institute for NEXT Generation IT Systems (ITNG)

Director: Dr. Dennis Kekas

The Institute for NEXT Generation IT Systems (ITNG) provides information technology professional services to state and federal agencies, private and public sector corporations, and research organizations.
**Institute for Nonprofit Research, Education and Engagement** (INPREE)

**Director: Dr. Richard Clerkin**

The Institute for Nonprofit Research, Education and Engagement (INPREE) benefits the university through its presence as an expert source for information on nonprofits, respected partner in research and practice collaborations, recipient of external funding, and developer and manager of educational and research initiatives.

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**Institute for Transportation Research and Education** (ITRE)

**Director: Dr. E. Downey Brill (Interim Director)**

The Institute for Transportation Research and Education (ITRE) carries out research, training and technical support activities in the areas of surface and air transportation for a host of national, state, and local clients to address the nation’s critical transportation issues.

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**Kenan Institute for Engineering, Technology & Science** (KIETS)

**Director: Dr. Ruben Carbonell**

The Kenan Institute for Engineering, Technology & Science (KIETS) develops partnerships in basic research, education, commercialization and public outreach with individuals and organizations dedicated to the advancement of science, engineering and technology as a force in improving the economic and social well-being of the nation and the world.

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**Next Generation Power Electronics Manufacturing Innovation Institute** (NGPEMII)

**Director: Nick Justice**

The Next Generation Power Electronics Manufacturing Innovation Institute ("Power America") is accelerating the adoption of advanced semiconductor components made with silicon carbide (SiC) and gallium nitride (GaN) into a wide range of products and systems.

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**Nonwovens Institute** (NWI)

**Director: Dr. Behnam Pourdeyhimi**

The Nonwovens Institute (NWI) is the world's first accredited academic program for the interdisciplinary study of engineered fabrics through an innovative partnership of industry, government, and academe. Operating on an 'open' platform, The Nonwovens Institute enables industry and university experts to develop the next generation of nonwoven applications while
educating and training future industry leaders.

**North Carolina Clean Energy Technology Center (NCCETC)**

**Director: Mr. Steve Kalland**

The mission of the North Carolina Clean Energy Technology Center (NCCETC) is to advance a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies.

**North Carolina Institute for Climate Studies (NCICS)**

**Director: Otis Brown**

The mission of the North Carolina Institute for Climate Studies (NCICS) is to promote the discovery of new knowledge about global, regional, and local climate variability and its impacts and to provide information that is critical for determining trends and validating climate forecasts at all of these spatial scales.

**North Carolina Japan Center (NCJC)**

**Director: Ingrid Schmidt (Interim Director)**

The North Carolina Japan Center (NCJC) is a statewide resource, which serves to promote mutual understanding and closer relations between the people of North Carolina and Japan in academic, business cultural, educational, scientific, and technical matters, to the benefit of our state and its people.

**North Carolina Sea Grant College Program (NCSG)**

**Director: Dr. Susan Norma White**

The North Carolina Sea Grant (NCSG) program is one of 33 university-based programs across the United States authorized through the National Sea Grant College Program Act of 1966. Through research, outreach and education programs, NCSG provides unbiased, science-based information to enhance the sustainable use and conservation of ocean and coastal resources to benefit communities, the economy and the environment. NCSG is a multi-campus program of the University of North Carolina system.
Nuclear Reactor Program (NRP)

Director: Dr. Ayman Hawari

The Nuclear Reactor Program (NRP) applies reactor and nuclear techniques in supporting efforts to provide high quality undergraduate and graduate education, perform basic and applied research, disseminate knowledge, and provide training and specialized analytical services in support of institutions, agencies and industries in the State of North Carolina and the Nation.

Small Business and Technology Development Center (SBTDC)

Director: Dr. Scott Daugherty

The multi-campus Small Business and Technology Development Center (SBTDC) is committed to providing knowledge, education and other supportive resources that enable existing small and mid-sized businesses, emerging entrepreneurs and local/state leaders to innovate and succeed.

Southeast Dairy Foods Research Center (SDFRC)

Director: Dr. MaryAnne Drake

The Southeast Dairy Foods Research Center (SDFRC) conducts research, educates scientists, and develops and applies new technologies for processing of milk and its components into dairy products and ingredients with improved health, safety, quality and expanded functionalities that facilitate strategic decisions in the industry.

State Climate Office of North Carolina (SCONC)

Director: Dr. Aaron Sims (Interim Director)

The State Climate Office of North Carolina (SCO) is the primary source for NC weather and climate information and is involved in all aspects of climate research, education, and extension services.

W. M. Keck Center for Behavioral Biology (The) (CBB)

Director: Dr. Robert Anholt

The goal of the Keck Center for Behavioral Biology (CBB) is to establish a multidisciplinary environment for interdepartmental training and collaborative research in the fundamental principles that govern animal behavior.
**Water Resources Research Institute (WRRI)**

**Director: Dr. Susan Norma White**

The Water Resources Research Institute (WRRI) is one of 54 state water institutes that were authorized by the Water Resources Research Act of 1964 to administer and promote federal/state partnership in research and information transfer on water-related issues. WRRI is a multi-campus Institute.

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**William and Ida Friday Institute for Educational Innovation (WIFIEI)**

**Director: Dr. Glenn Kleiman**

The mission of the William and Ida Friday Institute for Educational Innovation (WIFIEI) is to advance education through innovation in teaching, learning, and leadership.