

NC State Civic Action Plan

THINK | DO | ENGAGE

NC STATE
UNIVERSITY

Opening Statement

There's an argument NC State doesn't need a Civic Action Plan. After all, from our inception we have been a public land grant university dedicated to delivering a "liberal and practical" education, to extending our students, faculty and staff into communities across the state and around the world. We've been doing the work of engagement.

There's another argument that there's no time or resources to take any kind of "civic action" during a pandemic. This is a time, the argument goes, to retreat inward, to hunker down and wait it out.

We reject both of these ideas.

NC State has received well-earned praise for our civic engagement, which the American Association of Colleges and Universities defines as "working to make a difference in the civic life of our communities...developing the combination of skills, valuable and motivation to make that difference, ...promoting the quality of life in a community, and participat(ing) in activities that are both individually life enriching and socially beneficial to the community." We'll keep doing those things.

What a Civic Action Plan does is to outline clear steps we can take to do more – and better. It helps us become more intentional, specific and accountable in our efforts to serve our communities.

And as the world faces a crisis different than any we have faced before, we need NC State acting now – to grow new problem solvers and discover our path forward, to address foundational issues of racial and social justice and, working as committed partners, to listen to, learn from and then assist communities in solving the daunting challenges they face.

We need a Civic Action Plan. Thanks to you and your advice and support, we have one. Let's go.

Leslie Boney

Vice Provost, Outreach and Engagement

Executive Summary

In early 2016, NC State Chancellor Randy Woodson, along with more than 450 Chancellors and Presidents, signed a Civic Action Statement in recognition of Campus Compact's 30th anniversary. This statement was a declaration of shared commitments to the public purposes of higher education. Upon signing the Civic Action Statement, each university was asked to develop a **Civic Action Plan** that identified its existing and future civic action initiatives.



Campus Compact
30th Anniversary Civic Action Statements

We empower our students, faculty, staff and community partners to co-create mutually respectful partnerships in pursuit of a just, equitable, and sustainable future for communities beyond the campus – nearby and around the world.

We prepare our students for lives of engaged citizenship, with the motivation and capacity to deliberate, act, and lead in pursuit of the public good.

We embrace our responsibilities as place-based institutions, contributing to the health and strength of our communities – economically, socially, environmentally, educationally, and politically.

We harness the capacity of our institutions – through research, teaching, partnerships, and institutional practice – to challenge the prevailing social and economic inequalities that threaten our democratic future.

We foster an environment that consistently affirms the centrality of the public purposes of higher education by setting high expectations for members of the campus community to contribute to their achievement.

NC State has a long history of civic action built into its public service mission as a land grant and research extensive institution. As a campus-wide office, Outreach and Engagement works to connect, support, and promote civic engagement and civic action across campus and with the local and statewide communities it serves. This NC State **Civic Action Plan** is designed to demonstrate how the university can further fulfill and grow its efforts to accomplish these civic action goals. The civic action activities highlighted in the pages that follow are not an exhaustive list. However, they collectively represent a broad range of activities across the university involving faculty, students, staff, and programs. These activities are organized according to the following broad categories: Curricular; Co-Curricular; Scholarship, Discovery and Knowledge; and Place-Based Mission. This cataloguing and review have allowed us to provide several recommendations for enhancing the university's civic action mission.

The NC State ***Civic Action Plan*** represents the efforts of the Vice Provost Office of Outreach and Engagement (O&E), and the Engagement Operations Council (EOC), a working group of representatives from across the university, as well as community partners, to identify civic action policies and programs that would benefit both the campus and the external communities it serves. We first conducted a review of existing civic action activities across the university. What we found was that there presently exists a large and diverse number of civic and community engagement efforts at NC State that collectively address the five goals of the Campus Compact statements to develop mutually beneficial partnerships, educate an active and engaged citizenry, challenge social and economic inequalities, and center NC State as an anchor institution in our local and regional communities. The review and subsequent work of the EOC also identified several areas where we can become stronger, improve and better communicate our existing efforts, and expand and deepen the public purposes of our land grant institution.

Our Pledge

As a publicly-engaged university, NC State will work to become a national leader in civic engagement that will leverage the strengths of our land grant and extension missions to build an integrated civic engagement capacity across faculty, students, staff, and programs. Through research and service, we will provide opportunities that fully prepare students for lives of engaged citizenship that positively impact the civic life of their communities. To achieve these goals, this Civic Action Plan recommends the following:

Build institutional capacity for curricular and co-curricular learning that contributes to developing an engaged citizenry.

1. Connect curricular and co-curricular learning to the NC State University land-grant mission to serve North Carolina communities and create engaged citizenry.
 - a. Create messaging about the land-grant mission and its connection to engaged learning & citizenship.
 - b. Raise expectations for engagement as central to the NC State student experience. Leverage with new student orientation, co-curricular programs, campus faculty, and advisors.
2. Provide best practice training & support for community-engaged teaching and learning through the pedagogy of service-learning
 - a. Develop a centralized source for resources, training, and networking for community-engaged teaching and learning.
 - b. Provide regular and systematic faculty development in critical service-learning; Build connections and support between faculty.

- c. Enable Provide systematic training & registration for students & faculty preparing for community engagement.
- 3. Develop the citizenship capacity of NC State students through robust skill-building in civic conversation and democratic engagement.

Empower NC State faculty as community-engaged scholars.

- 1. Envision and execute professional development strategies that increase faculty knowledge of engagement as a legitimate, exciting, and valued form of scholarship.
 - a. Develop and implement a speaker series, video vignettes, templates, a 'best in class' publication, funding workshops, etc.
- 2. Envision and execute strategies to help faculty more effectively and consistently document their engagement accomplishments in tenure/promotion dossiers.
 - a. Develop a campus-wide portal/database for collecting faculty engagement activity.
 - b. Develop and implement checklists of what qualifies as recognized engagement, informed by college practices as standard for promotion.
 - c. Develop a central library of sample tenure rule engagement to be used for departmental policies and practices.
- 3. Promote the culture of engaged scholarship by supporting faculty knowledge and connections to national and international organizations focused on higher education engagement.

Build the institutional capacity to create mutually beneficial partnerships across North Carolina and beyond.

- 1. Ensure the provision of needed resources to enhance reciprocal partnerships, particularly those that address community needs.
 - a. Provide recurring financial and non-financial resources for University and community partnerships.
 - b. Develop reward/support programs to increase the number of non-Extension faculty and staff participating in engagement activities.
- 2. Create easily accessible channels for community voices in relevant University policies and decision-making.
 - a. Consider a University-wide body focused on engagement to decide how to integrate community voices meaningfully into

Community-University partnerships.

- b. Expand, support, and promote existing campus advisory groups to ensure high-quality reciprocal relationships.

Recommendations to support all three goals:

1. Create and maintain a portal/database to support engaged research and teaching, interdisciplinary collaborations, connecting with community partners, documenting impact, and collecting data to report to external constituencies (e.g., local communities, APLU, and Carnegie designations, UNC General Administration, etc.).
 - a. Create a comprehensive list of community engagement partnerships (teaching, scholarship, and engagement).
 - b. Catalyze connections between faculty and students doing engagement work through online forums and resource sharing.
 - c. Establish a system for systematically assessing and documenting the impact of public engagement related teaching, scholarship, and other practices and policies on community partners and stakeholders.
2. Provide training for students, faculty, and staff on how to engage with communities effectively. This training should include topics on protecting vulnerable populations, cultural competency, logistics, insurance, etc.

Introduction

As the world has changed, our reach has expanded beyond North Carolina's borders and across the globe, challenging us to be locally responsive to the needs of our community and our state while globally engaging the grand challenges facing our international community.

–NC State Strategic Goal 5: Engage Locally and Globally¹

NC State University has a long history of civic action built into its public service mission as a land grant and research extensive institution. The civic and community engagement mission is driven by its 2011-2020 Strategic Plan¹ as well as that of The University of North Carolina System². NC State's Office of Outreach and Engagement serves as a campus-wide unit that works to connect, support, and promote civic engagement and civic action across campus and with the communities it serves. The university's Cooperative Extension Service assists in rural and urban communities by providing agricultural, economic, and social support to citizens in all 100 counties in the state. The university is also a Sea Grant institution that provides research, education, and outreach opportunities relating to current issues affecting the North Carolina coast and its communities. The extension mission is represented in other colleges as well, including Engineering (Industrial Expansion Solutions), Natural Resources (Forestry Extension), and Textiles (Zeis Textile Extension for Education and Economic Impact).

NC State is also home to several units focused on Small Business Technology and Development, Entrepreneurship, Economic

Development Partnerships, and Global Engagement that provide resources in the form of research and technical support to communities, clients, and partners both locally and internationally. And finally, the university's efforts to civically engage students is anchored in several co-curricular local and international opportunities offered across colleges and particularly through the Division of Academic and Student Affairs.

This institutional infrastructure has led to a number recognitions and awards for community engagement and engagement scholarship in recent years as well as centers and institutes that work with urban and rural communities, nonprofit organizations, startup companies and small businesses, to stimulate and promote community and economic engagement, and engaged scholarship. Among the designations and memberships relevant to the civic action mission, NC State is a [Carnegie Engaged Institution](#), [Innovative and Economic Prosperity Public University](#) (Association of Public and Land Grant Universities), received the [2014 Innovation and Economic Prosperity Award for Place](#), and is a member of the [Engagement Scholarship Consortium](#), [Campus Compact](#), and the [American Association of Colleges and Universities](#).

NC STATE

University Outreach and Engagement Strategic Goals



Goal 1: Culture of Engagement

Invest in developing, supporting and rewarding new and innovative multidisciplinary ideas as we partner to promote a culture of local responsiveness and global engagement.



Goal 2: Community Collaboration and Partnerships

Leverage the distinct assets of the university to realize opportunities that emphasize reciprocity, collaboration and strong partnerships.



Goal 3: Capacity to Make a Difference

Utilize best practices to extend resources, share expertise, apply research outcomes and seek new opportunities to listen and learn.

The Office of [Outreach and Engagement](#) (O&E) has developed a set of strategic goals³ to connect, support, and promote the efforts of faculty, students, staff, and programs involved in civic or community engagement. O&E works across the university to identify civic action outcomes and how curriculum and programs intentionally prepare students for life as civically engaged citizens. Also, along with its community partners, O&E has developed a document outlining the *Principles of*

Community Engagement that provides guidelines for how the campus community can leverage its strengths in research and teaching to identify opportunities for engagement and collaboratively address community-identified needs proactively. These principles are designed to encourage faculty, researchers, and students to be cognizant of how their work is reciprocal, sustainable, and in the best interest of those with whom they are engaged.



Students at the Voting Jamboree in Talley Student Union hosted by the student government learn about the candidates in their voting districts on Monday. Photo by Sindy Huang of the NC State Technician.

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NC State Principles of Community Engagement

Community-University Engagement is:

- Based on a mutually beneficial exchange of knowledge and expertise between communities and the university
- Purposeful and Responsive to Community-Identified issues
- Inclusive and Diverse
- Consistent with the university's role and mission related to the scholarship/discovery of Knowledge, teaching and learning, extension and engagement, creative Artistry/Literature, technological/managerial Innovation, and service
- Open and Based on Mutual Learning
- Conducted through Transparency and Trust
- Impactful and Actionable
- Sustainable

Towards a Collaborative and Unifying Civic Action Plan

In early 2016, NC State Chancellor Randy Woodson, along with more than 450 Chancellors and Presidents, signed a Civic Action Statement in recognition of Campus Compact's 30th anniversary.⁴ This statement was a declaration of shared commitment to the public purposes of higher education and designed to

demonstrate the role of universities in developing and implementing mutually beneficial partnerships, educating an active and engaged citizenry, addressing the grand challenges of reducing social and economic inequalities, and centering the university as an anchor institution in its local and regional communities.



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Approach and Organization of the Civic Action Plan

Because civic engagement already occurs at a substantial level at NC State, we sought first to identify and document existing activities through publicly available materials including strategic plans, reports, and websites. We then scheduled a series of conversations with administrators and faculty across campus, including deans and their designees. We introduced the goals of the process as an effort “to identify the activities, policies, people, and programs within each college and major campus unit that help the university achieve the goals outlined in the civic action statements.” These conversations were guided by the following questions:

1. How do the colleges, departments, programs, or majors, via their curricula and pedagogy, help students understand civic engagement and become civically-engaged citizens once they graduate?
2. What faculty-led research, teaching, or programs within your unit support these civic action goals?
3. How is student civic engagement incorporated into the strategic goals of the college or department? How does it contribute to student success?

Although the current document provides a good snapshot of civic engagement at NC State, it *does not* represent the full scope of these activities. Nevertheless, for the office of Outreach and Engagement, collecting this information has given us a better understanding of the breadth and depth of existing university-generated civic engagement. It also provided an opportunity for cross-campus dialogues that were facilitated by O&E with the Engagement Operations Council (EOC), a campus-wide working group of administrators and faculty with engagement or extension responsibilities, and with representation from one strategic community partnership. The EOC created subcommittees around each of the three focal areas (curricular and co-curricular; scholarship, discovery, and knowledge; and NC State’s place-based mission). The charge for these subcommittees was to identify additional civic action policies and programs that could be incorporated into a Civic Action Plan for the university. The EOC recommendations are provided at the end of this document.

Existing Civic Action at NC State

This NC State Civic Action Plan is designed to demonstrate how the university fulfills and will seek to grow its efforts to accomplish these civic action goals. As its foundation, NC State uses the commonly accepted [definition of civic engagement](#) from the American Association of Colleges and Universities.⁵

“Civic engagement is working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes. In addition, civic engagement encompasses actions wherein individuals participate in activities of personal and public concern that are both individually life enriching and socially beneficial to the community.” [formatting...]

Civic engagement is embedded in the university’s history and life and reflected across all areas of the campus. What follows highlights how NC State practices its commitment to “Think | Do | Engage.”

Civic Action Across Campus

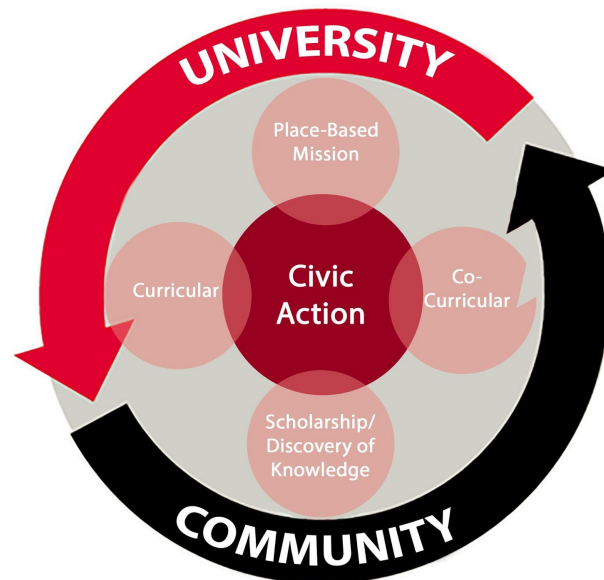


Figure 1: Civic Action Across All Sectors of the University

CURRICULAR ACTION

NC State's efforts to support civic engagement through curricular activity are embedded in its embrace of high impact educational practices⁶ and critical and creative thinking initiatives⁷. These intellectual standards have been proven to significantly improve student retention and academic success.⁸ More importantly, they serve as a strong foundation for advancing the civic action mission by providing educational experiences that encourage students to take ownership of their own learning and develop the skills needed to be good citizens that meaningfully contribute to society through their professional and personal lives. In addition, one of the key curricular vehicles for involving students in civic action is service-learning.^{9,10,11} Unfortunately, although a 2013 Provost's Task Force Report¹² provided a number of recommendations for improving the service-learning infrastructure within the university, considerable work remains to build capacity within departments and colleges. The following is a selective list of curricular strategies and programs across campus:

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Types of High Impact Educational Practices

- > Freshman Experience
- > Learning Communities
- > Undergraduate Research
- > Study Abroad
- > Internships
- > Common Intellectual Experiences
- > Collaborative Assignments and Projects
- > Diversity/Global Learning
- > Service and Community-based Learning

College of Design

Goal five of the College of Design's Strategic Plan focuses on "the pursuit of local and global engagement with a key strategy being to Integrate global awareness as a critical component of design education." These activities are often embedded in studio-based instruction in which faculty and students work with clients, often public agencies, on a variety of projects ranging from urban redevelopment to park planning. In addition, Design seeks to "Integrate global awareness as a critical component to improve student retention and academic success significantly of design education in an effort to ensure that all students have a depth of cross-cultural experiences which prepares them to function proactively in an increasingly diverse society."

College of Education

"We approach civic engagement through teacher education to help meet the needs of communities across the state. Particularly the educational needs in low-wealth and under-resourced counties. One of our main goals is to keep students in or have them return to work and live in their home counties."

–Dr. Anona Smith Williams, Associate Dean for Student Success and Strategic Community Engagement. College of Education

According to Dr. Williams, Education has enhanced its teacher education curriculum by including more conversations with students early in their first and second years about rural education, poverty, and how to be engaged as a teacher in ways that can better reach students living in those circumstances. In addition, a dual degree program with Community Colleges was recently implemented, and a graduate-level course that focuses on issues of social justice and equity is now taught.

SPOTLIGHT PROGRAM The Innovation Project (TIP) Leadership Academy

The TIP Leadership Academy (TLA) is sponsored by the NC Alliance for School Leadership and in partnership with The Innovation Project (TIP), a collaborative working group of forward-thinking North Carolina district superintendents. Under the leadership of Drs. Bonnie Fusarelli and Lance Fusarelli, NC State has partnered with three school districts (Greene, Lenoir, and Wilson Counties) to create and deliver a customized two-year Master of School Administration (MSA) degree program. The MSA is a non-traditional principal preparation program designed to be a solution to the stubborn, recurring problem of recruiting and retaining effective leaders for historically low-performing schools. TLA graduates make a three-year, post-degree commitment to work in local high-need schools, thus, providing a robust leadership pipeline and succession plan for the three TIP districts. The program uses a rigorous process to select Fellows and then prepares principals through a context-specific and experiential curriculum that requires participants to demonstrate their leadership skills through solving authentic school problems with the support of executive coaches. Program experiences are customized to focus on turnaround principles for low-performing, high-poverty schools and communities.

CO-CURRICULAR CIVIC ACTION

*Co-curricular refers to activities, programs, and learning experiences that complement, in some way, what students are learning in school—i.e., experiences that are connected to or mirror the academic curriculum. Co-curricular activities are typically, but not always, defined by their separation from academic courses.*¹³ Co-Curricular activities at NC State occur through both academic and student affairs units and often provide students with the most direct opportunities to engage with community partners, participate in activities focused on equity and social justice, and contribute to the health and well being of people and communities. Examples of select co-curricular programs are provided below.

The Division of Academic and Student Affairs (DASA)

A number of co-curricular activities at NC State occur through DASA which has built an infrastructure of support for student life that provides opportunity for students to build their civic action portfolio and mature into civically engaged citizens. These initiatives are driven by a strategic plan in which civic engagement is embedded within its third strategic goal: *Build Your community*.¹⁴ Among these community-building strategies are initiatives designed to “Promoting Student Success Through Engagement” and “Increase student participation in civic engagement activities.” Programs include:

Leadership and Civic Engagement (formerly the Center for Student Leadership Ethics and Public Service or CSLEPS)

Leadership and Civic Engagement *complements the classroom academic experience through high impact programs and services that empower and equip students with skills, knowledge, and tools to be leaders who forge paths for positive change and who work collectively to forge a socially just world for all people.* Among the initiatives that fit within a **Civic Action** framework are the following:

- [USC 298: Introduction to Civic Engagement and Social Change](#) (new - fall 2018) - This course is designed to give students a basic understanding of key concepts and frameworks of civic engagement. Students will critically examine university-community relationships, power structures, and develop a civic action plan to inspire a more civically engaged society.
- [Alternative Service Break](#) (24 separate experiences) - Provides high impact learning experiences which engage students in direct service with a community while being immersed in the culture. Led by students and accompanied by faculty advisors, team members participate in a variety of cultural, educational, recreational, and reflective activities to enhance their educational experience. During breaks, students serve in

NC, across the country, and around the world. A variety of social issues are explored including: water quality and sanitation, affordable housing, youth education and empowerment, GLBT and civil rights, environmental justice, and hunger and homelessness.

- Voter Engagement and Pack the Polls (voter engagement and voter education) - Co-leads the Pack the Polls committee, along with Student Government.
- [Feed the Pack Food Pantry](#) - A student-led, university-supported community-based initiative to combat the food insecurity experienced by members of the NC State community.
- [Online service platform](#) - (new - fall 2018) Students, faculty, and staff can easily connect to community partners through the new online service platform to find service opportunities for individual groups, and track service and volunteer hours. Students are encouraged to be involved in addressing local community needs through one-time volunteer opportunities as well as longer-term relationships with community organizations.
- [Civically Engaged Scholars](#) - This program provides students with opportunities to expand the role of service in their lives and transform themselves into active civically engaged scholars. Through skills-based training, leadership development, and service-learning projects, students are encouraged to create positive change within the community beyond volunteerism. Civically Engaged Scholars complete 200+ hours of service, undergraduate research, and advocacy to create a more informed and civically engaged society that addresses the needs of our community.



College of Sciences (COS)

“When students leave our college we want them to be critical thinkers who are engaged in the community and who see science as part of multiple layers of the world and is all interconnected.”

–Dr. Jamilla Simpson, Assistant Dean for Academic Programs, Student Diversity and Engagement, College of Sciences

Sciences has a fairly robust number of programs and activities that both promote and seek to achieve student involvement. Among these are the Sciences Ambassadors program, the 18 science clubs, and the Sciences Council which is comprised of membership from each club. In addition the Science House (described below in the “place-based” section) is the primary outreach and engagement unit of the college that provides co-curricular opportunities for students in ways that bring science, technology, engineering, and math to K-12 students and teachers across the state of North Carolina.



Poole College of Management (PCOM)

“The college has a responsibility to educate business students about the importance of their responsibility as future business leaders on what it means to understand what it means to have an inclusive mindset, understand differences, understand privilege, and use their own privilege for the public good.”

–Dr. Tamah Morant, Associate Dean for Undergraduate Programs, Poole College of Management

According to Dr. Morant, PCOM seeks to achieve civic action through community involvement. This includes exposing students to international opportunities, internships, and other forms of real life experiences. Many of these opportunities are co-curricular (see below) but with the goal of helping students understand the real world impact of business and their chosen professions.

Entrepreneurial Clinic

According to the website, the Entrepreneurial Clinic “...integrates research, teaching and work experience by providing a place where faculty, students, entrepreneurs and service providers go to teach, learn and build the next generation of businesses in Raleigh. Housed in HQ Raleigh, one of the Triangle’s largest co-working hubs, the Entrepreneurship Clinic immerses students in an entrepreneurial ecosystem. Much like a medical student observing and learning from a surgeon in an operating room, clinicians observe and learn from startup founders. The Clinic’s mission is to produce the highest quality, entrepreneurially-minded students with the skills to make a big impact.



College of Humanities and Social Sciences (H&SS)

Social Innovation + Entrepreneurship

The Social Innovation + Entrepreneurship program is a teaching-learning-living laboratory for social entrepreneurship that seeks to:

1. Educate and empower students and faculty in new methodologies that improve the human condition.
2. Transform existing organizations, businesses, and structures to be more innovative, sustainable, and effective change agents.
3. Link and channel resources of campus and community to create powerful opportunities for learning and social impact.
4. Support campus and community social entrepreneurs and the creation of social enterprises.

Social Innovation Fellows

One of the key SEI initiatives is the Social Innovation Fellows program which “offers students from every discipline across the campus a dynamic, yearlong team experience to learn adaptive leadership skills to become successful social entrepreneurs and innovators, and technical skills to create and launch enterprises or projects that seek to achieve social impact. Started in 2017, the fellows program uses concepts from design thinking, sustainability, business methods, and nonprofit models to help students step outside their disciplinary silos and into a learning experience that blends and integrates diverse knowledge, perspectives, and best practice. Bridging the skills and knowledge of STEM, Humanities, and other disciplines, carefully curated topics and a diverse team experience offers students an interdisciplinary and highly engaged learning experience.



CIVIC ACTION IN SCHOLARSHIP, DISCOVERY & KNOWLEDGE

As one of the primary missions of a research extensive higher education institution, scholarship, discovery, and knowledge is the route through which faculty and students can have the greatest impact on the civic life of communities; locally, across the state and nation, and globally.

According to the 2010 NC State report of the Vice Chancellor's task force on the Scholarship of Engagement,¹⁵ *The scholarship of engagement is the collaborative generation, refinement, conservation, and exchange of mutually beneficial and societally relevant knowledge that is communicated to and validated by peers in academe and the community.* Clearly embedded within this definition is the opportunity for civically driven research and scholarship that has broader social and economic impacts on the communities served by the university. In fact, a 2016 faculty survey of engagement activity revealed that over 80% of respondents reported being involved in some form of community engagement activity within the year preceding the survey. Much of this activity, however, was also reported to have been conducted outside of their primary job responsibilities—the degree to which civic action is represented within the tremendous amount of research activity that occurs through NC State is not well understood. The Office of Outreach and Engagement and the Office of Institutional Research and Planning are currently working on better capturing the research and teaching missions with which faculty are involved. A few representative scholarship of engagement research projects are highlighted below:

[The Community Counseling, Education, and Research Center](#) (College of Education)¹⁶

CCERC seeks to become a national model for training and service delivery that maintains fidelity to the core counseling values of prevention, development, wellness, multiculturalism, social justice, and advocacy. We support the overall mission of NC State University through the establishment of active partnerships with business, government, community, and schools and by creating a dynamic student-centered learning environment.

–Marc A. Grimmatt, CCERC Founder, Associate Professor, Counselor Education, College of Education

The Community Counseling, Education, and Research Center (CCERC) is a community engagement and research project that addresses a critical public health need for accessible, affordable, high-quality mental health services focused on wellness. Counseling services are provided by masters and doctoral level counselor education students enrolled in counseling practicum and internship courses that are supervised and taught by counselor education faculty. These therapeutic services focus on health and wellness as well as career development for individuals, couples and families. CCERC services are available to community members who are self-referred or referred by community partners such as schools, university counseling

centers, private practice, and human services agencies. CCERC research operates through a community-engaged scholarship conceptual framework that emphasizes the generation and exchange of mutually beneficial knowledge and practices developed through active partnerships between the academy and the community. Ongoing assessments are designed to determine the impact of the CCERC on addressing the structural problems within mental health service delivery systems.

Juntos (Cooperative Extension)¹⁷

Research shows that Latino youth are at greatest risk for dropping out of school between the 9th and 10th grades. Juntos (pronounced “Who-n-toes” meaning “Together” in Spanish) is an NC State Extension program that works with schools and communities to help Latinx students achieve academic success and prepare for higher education. The Juntos Program reduces this risk by bringing together cohorts of 8th-grade youth to support each other for three to five years as they enter high school and prepare together for higher education. More specifically, Juntos’s objectives are to increase family engagement and a sense of belonging among Latino students and families in their schools and communities; improve student attendance, grades, and high school graduation rates; and increase the percentage of Latino students who go on to higher education. Accordingly, Juntos empowers students and their families to gain the knowledge and resources they need for success via four components: Family Engagement, the Juntos 4-H Clubs, Success Coaching and Mentoring, and the Juntos Summer Academy. Over the past 10 years, research has demonstrated how Juntos has been successful at improving the grades of 89% of the participating students and achieving a 100% on-time graduation rate for participating high school seniors. This success has led to an expansion of the program into over 12 states across the country.

People-First Tourism Lab (College of Natural Resources)¹⁸

The People-First Tourism Lab (P1tLab) was established in Spring 2011 by NC State University faculty and students to explore ways in which tourism microentrepreneurship by people with vulnerable livelihoods might fuel equitable and sustainable development in destination communities. The lab’s focus and structure are grounded on best practices from varied disciplines including microfinance, development aid, applied anthropology, community psychology, and liberating education. P1tLab has grown into a multi-disciplinary research, learning and innovation ecosystem with active members from almost every college in the university, Extension specialists, and Extension agents across the State.

NC State’s P1tLab is led and supported by faculty and students working in partnership with community organizations to recruit and support microentrepreneurs offering genuine experiences to tourists (e.g., downtown art walks, hands-on farm experiences, historic heritage

tours). These academic/community teams accompany groups of microentrepreneurs, help them get registered on web-based marketplaces, and collect data regularly to monitor the microentrepreneurs' development and their impact on their communities. P1tLab also generates high-impact learning experiences by facilitating student engagement with people with vulnerable livelihoods both in North Carolina and developing regions abroad. To ensure that the initiative generates proportionate benefits to the participating communities and microentrepreneurs, P1tLab liaisons closely with People-First Tourism Inc. ([P1t Inc.](#)), NC State's first tech-based social startup that sells experiences and packages provided by the participants.

Although stated and developed in North Carolina, P1tLab is expanding to other US states and countries via a *glocal* approach in which each Lab in the US and abroad is engaged with communities in their respective locations. Collectively this growing network of faculty, students and community partners involved in P1tLab co-created a [Manifesto of the People-First Tourism Movement](#) that outlines a shared commitment to making tourism a force for equitable and sustainable community development.

Protective Workwear for Agricultural Workers (Wilson College of Textiles)¹⁹

This student-led research project addressed how farming workwear can improve by using hemp fiber and adding design elements and surface modification to protect farmers and farmworkers better. North Carolina has the sixth-largest migrant worker population in the nation; conservative estimates number these farmworkers and their dependents at 150,000 per growing season. Migrant laborers face on-the-job hazards like UV radiation, heatstroke and pesticide poisoning, yet they work long days in clothing ill-suited for the fields. Fashion and Textile Design graduate Ashley Maurice and Textile Technology major Ngoc Nguyen collaborated to search for a protective fabric finish for these garments through a project called [Protége](#), Spanish for "protect yourself." The project's idea was generated in a menswear fashion and textile design class taught by Dr. Katherine Annette-Hitchcock, an Associate Professor in the Department of Textile and Apparel, Technology and Management. Students were required to design a menswear look that addressed an environmental concern in the workplace.

After analyzing the workers movements, the researchers considered functional product design characteristics that would be prioritized in the final prototype. Various development sketches were created, a final design iterated, and a prototype sewn using hemp Summercloth with a modified surface finish. Subsequent tests demonstrated fabric breathability, durability, and tear strength. The resulting garment design is one that is easy to remove and reduces that amount of direct contact of wearer skin with areas of the garment exposed to pesticide. The next step in the garment design process will be to determine if it is practical for agricultural workers in the field and produced within the price range of the intended user.

CIVIC ACTION AND NC STATE'S PLACE BASED MISSION

For NC State, a land grant university, the *State is the Place*. As an anchor institution and one embracing its emerging urban-serving identity, NC State continues to create new economic opportunities, grow small businesses, and conduct research that addresses economic, environmental, and educational challenges. Some of these more prominent efforts are highlighted below:

College of Agricultural and Life Sciences (CALS)

Across each of the core themes in the [CALS strategic plan](#), the college is outwardly and civically focused on how faculty, researchers, and students can improve the agricultural and environmental lives and livelihoods within the state of North Carolina. As indicated in figure 2, these themes are often integrated into partnership models that seek interdisciplinary answers to pressing issues across humans, animals, plants, and the environment. As a state that remains heavily rural and is experiencing tensions associated with urban-rural issues, the need to address prevailing social and economic inequalities is critical.

CALS Place-Based Strategic Themes

1. Enhancing the production, quality, accessibility and profitability of food, plant, animal and bioenergy products for North Carolina, the nation and the world;
2. Ensuring environmental stewardship and sustainability of air, land, soil and water resources;
3. Creating a food supply that is safe, secure, healthy, affordable and of high quality;
4. Improving human health and well-being for individuals, families and communities; and
5. Preparing students and stakeholders for leadership and success in the global workforce.

4-H Citizenship North Carolina Focus

At Citizenship NC Focus, 4-Hers from across the state gather annually to exchange ideas, gain knowledge and learn through hands-on experiences about the importance of being an active and engaged citizen. Through various conference sessions and facilitated discussions, delegates learn and share



Figure 2: CALS Strategic Orientation

information related to local, state, and national governments and learn how they could impact citizenship. The event culminates with delegates traveling to the Legislative Building in Raleigh to meet with their elected officials and their staff. North Carolina 4-H is Cooperative Extension's youth development program, and North Carolina's Electric Cooperatives sponsor 4-H Citizenship North Carolina Focus.



College of Education (CED)

The Brothers United in Leadership Development (B.U.I.L.D.) Summit

"We want our participants to examine their personal identities and both understand and explore their roles in how they will work to build their communities as effective leaders and citizens."

—Regina Gavin Williams, Director for Student Engagement and Diversity Coordinator

B.U.I.L.D. is an annual event designed to expose 9th -11th-grade high school male students, in particular male students of color, to the diverse role of leaders in a growing global society. Through the summit, participants will learn leadership skills, the variety of academic disciplines in the education field, develop skills to enhance their career and college readiness, and have the opportunity to form connections with other participants. Participants also have the

opportunity to interact with NC State college students, university faculty, community leaders, and K-12 teachers and administrators, as well as increase their knowledge about the post-secondary education environment.



College of Humanities and Social Sciences (H&SS)

The Center for Family and Community Engagement (CFACE)

The Wake County Community-University Partnership (WakeCUP) is a community-university partnership model constructed in the spirit of pursuing a just, equitable, and sustainable future in communities in Wake County, North Carolina, the home of NC State University. First established within the University Office of Outreach and Engagement, The WakeCUP extends from a Memorandum of Understanding (MOU) with Wake County Human Services that is directly connected to the County Commissioners' strategic goal focused on *Social and Economic Vitality* within two engagement zones, Southeast Raleigh and Northeast Wake county. The MOU utilizes a

WakeCUP Focal Areas

Focal Areas	Sub Areas
Civic Engagement	Capacity Building Leadership Development Civil Discourse Justice Equity and Inclusion Volunteerism
Community Wellness	Food Access and Security Mental Health Placemaking
Economic Opportunity	Income Mobility Entrepreneurship Human Capital Development Transportation

collective impact approach and provides a framework for more intentionally connecting NC State faculty, students, researchers, and academic programs to community-identified needs and partners. To date, the WakeCUP has engaged local municipalities, nonprofits, and private stakeholders to develop strategic partnership goals focused on creating community wealth, community health, and community resilience. To date, WakeCUP has generated research and engaged learning initiatives through partnerships involving faculty and students in six of NC State's ten academic colleges.

College of Sciences (COS)

The Science House

According to the website: "Since The Science House was founded in 1991, it has remained committed to bridging the resources of North Carolina's largest research institution to K-12 students and educators across the state. Providing resources, programs, and teaching materials, The Science House empowers scientific literacy and hands-on discovery. What started as one office in Raleigh, N.C., has grown to include four satellite locations in Lenoir, Jacksonville, Asheville, and Edenton. By partnering university researchers and students with innovative programs and volunteer opportunities, including the Science Olympiad, The Science House helps educators produce successful grants, powerful outreach, and a platform to make a real difference in advancing STEM to every corner of the state."

Economic Development Partnerships

NC State's Economic Development Partnership works with the NC Department of Commerce, Research Triangle Regional Partnership, Research Triangle Foundation, Wake County Economic Development, Raleigh Economic Development, and other partners to foster economic growth and job creation across the state. To achieve these goals, the Economic Development Partnership:

- recruits new business and industry to NC State's Centennial Campus, as well as the region and state, and assists organizations interested in expanding here;
- cultivates relationships and provides critical connections to local and statewide resources and partners, including University researchers and scholars;
- assists companies with talent location, workforce preparedness, and educational programs; and
- helps rural and underdeveloped areas leverage University and state assets to grow their local economies.

Institute for Emerging Issues

Established in 2002, the Institute for Emerging Issues (IEI) at NC State University is a non-partisan, public policy, think-and-do organization focused on the future of North Carolina. Working collaboratively with people from all sectors and areas of the state, IEI builds an enduring capacity for progress. IEI serves the people of North Carolina—inspiring citizens and leaders to anticipate future challenges. IEI helps North Carolinians build consensus, then move to action. For more than 30 years, Emerging Issues Forums and related programs have helped catalyze the policy reforms, public investments, and other proactive responses required to build an enduring capacity for progress in North Carolina. Our work on the ground with communities enables us to test out public policy solutions in real-time to demonstrate what works. Through this work, we find solutions that meet local needs and have the potential to scale statewide. Through podcasts, public forums, programmatic work, and a large array of other mediums, IEI invites North Carolinians into an ongoing dialogue about our state’s future.

Shelton Leadership Institute

The mission of the Shelton Leadership Institute is “to inspire, educate, and develop values-based leaders committed to personal integrity, professional ethics, and selfless service.” The Center’s strategies to promote the development of values-based leaders locally, within the University and state, and also, nationally, and globally, are linked to objectives in the areas of youth development, executive leadership education, integration of values-based leadership initiatives, and scholarships and leadership enrichment experiences. Current initiatives include the Shelton Leadership Forum, which centers on the importance of values-based leadership development for corporations, educational institutions, community agencies and public officials, and the Chancellor’s Leadership Development Program, a leadership development program for incoming first-year students.

Strategic Partnerships

Built into many strategic plans across the colleges are the goals of forming strategic partnerships to address local, statewide, or global issues that capture an important dimension of the civic action mission. These include:

- **College of Design** - Goal five: Pursue local and global engagement
 - Integrate global awareness as a critical component of design education.
 - Serve the needs of a wide variety of community partners through ethical decision making.
 - Ensure that all students have a depth of cross-cultural experiences which prepares them to function proactively in an increasingly diverse society.

- Become a leader in faculty scholarship and engagement activities addressing social concerns and environmental justice.
- **College of Engineering** - Goal 5: Enhance Local and Global Engagement through Focused Strategic Partnerships
 - Encourage and foster entrepreneurship and economic development activities among students and faculty
 - Expand collaboration and outreach to K-12 students and teachers
 - Increase the impact of COE on key NC industry sectors
- **Poole College of Management** - Goal 3: Engagement: Strengthen external partnerships and global strategic alliances to inform research, enhance teaching, and develop approaches to solving real-world problems facing businesses, public policy-makers, thought leaders, and non-profit organizations.
- **Wilson College of Textiles** - Goal 5: Enhance local and global engagement through focused strategic partnerships with K-12 and North Carolina community colleges, and support growth in the cultural competence of our students, staff, faculty, and partners.

The Office of Outreach and Engagement

In addition, the following strategic partnerships are illustrative of intentional civic engagement partnerships through the Office of Outreach and Engagement (O&E). O&E's community-university partnerships, as articulated in Goal 2 of the O&E Strategic Plan, are designed to connect the university community in more intentional ways to collaborate with community organizations and local governments on community-identified needs.

Southeast Equine Research and Education Partnership (SEREP)²⁰

The Southeast Equine Research and Education Partnership (SEREP) was an intentional community-university partnership between the office of Outreach and Engagement at NC State and several communities in the Isothermal region of Western North Carolina. SEREP was an eponymous research study that arose from a grant received by Isothermal Community College (ICC) from the Appalachian Regional Commission (ARC). An interdisciplinary research team from NC State was formed to determine how the region could take advantage of the long-standing and burgeoning equestrian culture and economy to serve the needs of existing communities, attract investment, and create new businesses and jobs, and stimulate university-level research opportunities. For two years, the research team engaged with several individuals, community, and organizational stakeholders in Rutherford and Polk counties and collected a variety of quantitative and qualitative data to determine the feasibility of developing an equine research and education center. The study resulted in a proposal for a Southeast Equine Community and Research Center that would accommodate the equine-related education and research needs of local horse owners and farms, small businesses, and private and non-profit industry. The proposed center would increase local capacity and provide synergy

to the ICC's ongoing initiatives to provide training and other educational opportunities aimed at building the equine workforce. The center would also provide an opportunity to leverage the equine-related strengths of NC State University in the agricultural, animal, natural, social, and veterinary sciences. SEREP is identified in this report as an example of how community-university partnerships can generate economic and community development opportunities for rural communities, and in the process, fulfill the research and education missions by engaging multiple disciplinary areas within the university.



Civic Action Plan Recommendations

As outlined in this document, there presently exists a considerable number of civic and community engagement efforts at NC State University. These efforts variously reflect the five core principles of the Campus Compact Statements to more effectively develop mutually beneficial partnerships, educate an active and engaged citizenry, challenge social and economic inequalities, and center NC State as an anchor institution in our local and regional communities. However, we have also identified additional areas where we can become stronger; where we can improve and better communicate our existing efforts; and where we can expand and deepen the public purposes of the university. Accordingly, we recommend the following:

Build institutional capacity for curricular and co-curricular learning that contributes to developing an engaged citizenry.

1. Connect curricular and co-curricular learning to the NC State University land-grant mission to serve North Carolina communities and to create engaged citizenry.
 - a. Create messaging about the land-grant mission and its connection to engaged learning & citizenship.
 - b. Raise expectations for engagement as central to the NC State student experience. Leverage with new student orientation, co-curricular programs, campus faculty, and advisors.
2. Provide best practice resources & support for community-engaged teaching and learning
 - a. Develop a centralized source for community-engaged teaching tools & competencies.
 - b. Offer systematic training for community-engaged teaching and learning through the pedagogy of critical service-learning.
 - c. Build connections and support between faculty.
 - d. Provide systematic training & registration for students & faculty preparing for community engagement.
3. Develop the citizenship capacity of NC State students through robust skill-building in civic conversation and democratic engagement.

Empower NC State faculty as community-engaged scholars.

1. Envision and execute professional development strategies that increase faculty knowledge of engagement as a legitimate, exciting, and valued form of scholarship.

- a. Develop and implement a speaker series, video vignettes, templates, a 'best in class' publication, funding workshops, etc.
2. Envision and execute strategies to help faculty more effectively and consistently document their engagement accomplishments in tenure/promotion dossiers.
 - a. Develop a campus-wide portal/database for collecting faculty engagement activity.
 - b. Develop and implement checklists of what qualifies as recognized engagement, informed by college practices as standard for promotion.
 - c. Develop a central library of sample tenure rule engagement to be used for departmental policies and practices.
3. Promote the culture of engaged scholarship by supporting faculty knowledge and connections to national and international organizations focused on engagement in higher education.

Build the institutional capacity to create mutually beneficial partnerships across North Carolina and beyond.

1. Ensure the provision of needed resources to enhance reciprocal partnerships, particularly those that address community needs.
 - a. Provide recurring financial and non-financial resources for University and community partnerships.
 - b. Develop reward/support programs to increase the number of non-Extension faculty and staff participating in engagement activities.
2. Create easily accessible channels for community voices in relevant University policies and decision-making.
 - a. Consider a University-wide body focused on engagement to decide how to integrate community voices meaningfully into Community-University partnerships.
 - b. Expand, support, and promote existing campus advisory groups to ensure high-quality reciprocal relationships.

Recommendations to support all three goals:

1. Create and maintain a portal/database to support engaged research and teaching, interdisciplinary collaborations, connecting with community partners, documenting impact, collecting data for reporting to external constituencies (e.g., local communities, APLU, and Carnegie designations, UNC General Administration, etc.).

- a. Create a comprehensive list of community engagement partnerships (teaching, scholarship, and engagement).
 - b. Catalyze connections between faculty and students doing engagement work through online forums and resource sharing.
 - c. Establish a system for systematically assessing and documenting the impact of public engagement related teaching, scholarship, and other practices and policies on community partners and stakeholders.
2. Provide training for students, faculty, and staff on how to engage with communities effectively. This training should include topics on protecting vulnerable populations, cultural competency, logistics, insurance, etc.

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References

1. The Pathway to the Future: North Carolina State University Strategic Plan 2011-2020. (2011). Raleigh, NC: North Carolina State University.
<https://strategicplan.ncsu.edu/pathway-to-the-future/>
2. The University of North Carolina. (2016). Higher Expectations: Strategic Plan for The University of North Carolina 2017-2022. Chapel Hill, NC: The University of North Carolina.
https://www.northcarolina.edu/sites/default/files/unc_strategic_plan.pdf
3. *The New Engagement: A Bold Statement of Colliding Concepts Transcending Traditional Solutions - 2016-202 NCSU Strategic Plan*. (2016). Raleigh, NC: NC State University Office of Outreach & Engagement. <https://oe.ncsu.edu/wp-content/uploads/2017/01/strategicPlan.pdf>
4. *Campus Compact 30th Anniversary Action Statement of Presidents and Chancellors*. Campus Compact. <https://compact.org/actionstatement/>
5. *Civic responsibility and higher education* (2000). In edited by Thomas Ehrlich. (Ed.),. Oryx Press.
6. Partnership, G. S. (2013). *Co-Curricular Definition*. The Glossary of Education Reform.
<https://www.edglossary.org/co-curricular/>
7. Division of Academic and Student Affairs. (2014). *Division of Academic and Student Affairs Strategic Plan: 2014-2020*. Raleigh, NC: North Carolina State University.
<https://dasa.ncsu.edu/wp-content/uploads/2014/07/DASAStrategicPlan3.17.2014.pdf>
8. Scholarship of Engagement Task Force. (2010). *Integrating Learning, Discovery, and Engagement through the Scholarship of Engagement*. Raleigh, NC: North Carolina State University. <https://search.proquest.com/docview/1711868528>
9. Grimmett, M. A., Beckwith, A., Lupton-Smith, H., Agronin, J., & Englert, M. (2017). A Community Counseling Center Model for Multicultural and Social Justice Counselor Education. *Journal of Counselor Leadership and Advocacy*, 4(2), 161-171.
<https://doi.org/10.1080/2326716X.2017.1347390>
10. Kays R, 1971- author. *Candid creatures : how camera traps reveal the mysteries of nature*. Baltimore: Johns Hopkins University Press, 2016.
11. Anonymous Family Life Education with Latino Immigrant Families. In: Anonymous Thousand Oaks: SAGE Publications, Inc, 2012:165.
12. Behnke AO, Gonzalez LM, Cox RB. Latino Students in New Arrival States: Factors and Services to Prevent Youth From Dropping Out. *Hispanic Journal of Behavioral Sciences*

2010;32:385-409.

13. Partnership, G. S. (2013). *Co-Curricular Definition*. The Glossary of Education Reform. <https://www.edglossary.org/co-curricular/>
14. Division of Academic and Student Affairs. (2014). *Division of Academic and Student Affairs Strategic Plan: 2014-2020*. Raleigh, NC: North Carolina State University. <https://dasa.ncsu.edu/wp-content/uploads/2014/07/DASAStrategicPlan3.17.2014.pdf>
15. Scholarship of Engagement Task Force. (2010). *Integrating Learning, Discovery, and Engagement through the Scholarship of Engagement*. Raleigh, NC: North Carolina State University. <https://search.proquest.com/docview/1711868528>
16. Grimmert, Beckwith, Lupton-Smith, Agronin, & Englert, *Journal of Counselor Leadership and Advocacy*, 4(2), 161-171.
17. Kays R, 1971- author. *Candid creatures : how camera traps reveal the mysteries of nature*. Baltimore: Johns Hopkins University Press, 2016; Anonymous Family Life Education with Latino Immigrant Families. In: Anonymous Thousand Oaks: SAGE Publications, Inc, 2012:165; Behnke AO, Kelly C. *Creating Programs to Help Latino Youth Thrive at School: The Influence of Latino Parent Involvement Programs*. American Economic Journal: Economic Policy 2011;3:ii.
18. Nazariadli, S., Morais, D. B., Barbieri, C., & Smith, J. W. (2018). Does perception of authenticity attract visitors to agricultural settings? *Tourism Recreation Research*, 43(1), 91-104. <https://doi.org/10.1080/02508281.2017.1380144>; Morais, D., Jakes, S., Bowen, B., & Lelekacs, J. M. (2017). Fork2Farmer: Enabling Success of Small Farms Through Partnerships with Well-Known Chefs and the Tourism Sector. *Journal of Extension*, 55(2), 48-49. <https://doi.org/10.1097/01.GOX.0000526230.09701.d8>; Birendra, K. C., Morais, D. B., Seekamp, E., Smith, J. W., & Peterson, M. N. (2018). Bonding and Bridging Forms of Social Capital in Wildlife Tourism Microentrepreneurship: An Application of Social Network Analysis. *Sustainability*, 10(2), 315. <https://doi.org/10.3390/su10020315>
19. Textile News. (2018, -06-04T10:03:11+00:00). Protection by Design. <https://textiles.ncsu.edu/news/2018/06/protection-by-design/>
20. Pasalar, C., Morais, D., & Brookins, C. C. (2019). *Envisioning the Future: The Southeast Equine Community and Research Center - A Final Report*. Raleigh, NC: North Carolina State University. <https://doi.org/10.5281/zenodo.3261814>