Office of Instructional Programs
Senior Vice Provost Helen Chen

Office of University Interdisciplinary Programs
Senior Vice Provost Rob Dunn
Wolfpack 2030: Powering the Extraordinary

**Goal 1:** Empower students for a lifetime of success and impact.

**Goal 2:** Ensure preeminence in research, scholarship, innovation and collaboration.

**Goal 3:** Expand and advance our service to North Carolina and beyond — defining the standard for a 21st-century land-grant university.

**Goal 4:** Champion a culture of equity, diversity, inclusion, belonging and well-being in all we do.

**Goal 5:** Improve university effectiveness through transformative technologies, cutting-edge processes and actionable data.

**Goal 6:** Lead in developing innovative partnerships, entrepreneurial thinking and applied problem-solving.

**Goal 7:** Elevate the national and global reputation and visibility of NC State.
## Creation of OIP and OUIP

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<th>2021</th>
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<td><strong>Jul 1</strong>: SVP Miller steps back from DELTA and Continuing Education to focus on Entrepreneurship</td>
<td><strong>Jan 1</strong>: SVP Larick retires, reorganization begins</td>
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<td><strong>Oct 15</strong>: Provost’s Office announces planned retirements of SVPs Larick and Miller, and planned reorganization</td>
<td><strong>Jan 17</strong>: Interim SVP UIP Rob Dunn in place</td>
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<td><strong>Nov 9</strong>: Search for SVP IP begins</td>
<td><strong>Apr 27</strong>: Helen Chen named SVP IP</td>
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<td><strong>Nov 30</strong>: Search for SVP UIP begins</td>
<td><strong>Jun 3</strong>: Rob Dunn named SVP UIP</td>
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<td><strong>Dec 1</strong>: Interim SVP IP Courtney Thornton in place</td>
<td><strong>Jul 1</strong>: SVP Miller retires</td>
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<td><strong>Aug 1</strong>: Helen Chen arrives on campus</td>
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About Helen Chen

- Joined NC State in 2022
- Professor of Computer Science and Engineering
- Was head of the Division of Experience-based Learning and Career Education and associate provost at the University of Cincinnati
- Previously dean of College of STEM at Johnson C. Smith University
Office of Instructional Programs

Digital Education and Learning Technology Applications (DELTA)
- New program planning and development support
- Partnership development support
- Enterprise academic and emerging technologies support

NC State Continuing and Lifelong Education (NCSCaLE)
- Professional development
- Course design and production
- Online program branding, marketing and communications
- New academic initiatives, including integration of for- and not-for-credit, on- and off-campus, hybrid and distance programs

Universitywide Instructional Programs

Programs and services include:
Academic Planning

- Policy, Process and Practice
- Academic Structure
- Program Offerings
- Academic Partnerships
Innovative Programmatic Offerings

**Traditional**
- Course
- Certificate
- Subplan
- Degree Program

**Alternate**
- Noncredit Courses
- Micro-Credentials
- Stackable Credentials
- Digital Badges
- Industry-Recognized Certificates

**Experiential**
- Apprenticeship
- Competency-Based Learning
- Prior Learning Assessment
- Flexible Pathways to Degree
Digital Education and Learning Technology Applications (DELTA)

About

DELTA fosters the integration and support of digital learning in NC State’s academic programs, while also supporting online and distance education (DE) programs.

**Budget:** $15.5M

**Employees:** 113 staff

Activities (FY22)

**Help Desk and Training:** Resolved 6,708 help desk calls; offered 120 workshops

**Enterprise Academic Technology:** 740k hours of Zoom meetings; 6.5M livestream and lecture capture views

**Classroom Support:** 1,650 hours in 10 DELTA classrooms; 228 NC State classrooms now support classroom capture

**Online and DE:** 147k SCHs delivered; 124 programs were active; 52k exams proctored

Vice Provost
Donna Petherbridge
NC State Continuing and Lifelong Education (NCSCaLE)

About

NCSCaLE develops and delivers market-driven continuing and lifelong education programs and services for individuals, organizations and communities in NC and beyond.

Budget: $22.6M

Employees: 156 staff (permanent and temporary)

Activities (FY22)

Events/Programs: 1,269 (vs. 672 in FY21)

Participants: 95k (vs 36k in FY21)

Contracts/Grants: Center for Urban Affairs and Community Services generated $9.4M

Internal Partnerships: Working with Data Sciences Academy and Colleges of Design and Management on non-credit programs

Digital Skills Bootcamps: Offered with ThriveDX, 100+ graduates successfully secured employment
Institute for Advanced Analytics

About

The Institute prepares data savvy individuals for leadership in a digital world. The Institute’s flagship program is the Master of Science in Analytics.

**Budget:** $2.6M

**Employees:** 20 faculty and staff positions

Activities (AY21-22)

**Admissions:** For the 2022 admissions cycle, received 661 applications; acceptance rate was 24% and 122 students enrolled, with an average undergraduate GPA of 3.67.

**Outcomes:** Class of 2022 (15th cohort) graduated 115 students (94% graduation rate); employment at graduation was 100%, with an average base salary of $107,900.

Goodnight Director
Michael Rappa
Academic Planning Process

Research

Ideation

Program Design

Implementation
Partnerships and Collaboration

**NC State Groups**
- Council of Deans
- Assoc. Deans for Academic Affairs
- Administrative Board of the Graduate School (ABGS)
- Courses and Curriculum Committee (UCCC)
- Council on Undergraduate Education (CUE)
- Office of University Interdisciplinary Programs Advisory Committee
- SACS Substantive Change Review Team

**Provost’s Office**
- Fashaad Crawford
- Adrian Day
- Rob Dunn
- Heidi Hobbs
- Margery Overton
- Katharine Stewart
- Kelly Wick

**Liaison**
30-60-90 Day Plan

Learning (0-30)
Focus on culture, high priority projects, and process

Aligning (30-60)
Align on vision for the future

Executing (60-90)
Set up for long-term execution efficiency
30-60-90 Day Plan

Learning (0-30)
- Understand key responsibilities of the OIP
- Build relationships and trust
- Assess project/process/team

Aligning (30-60)
- Align OIP roles against Provost's Office vision
- Communicate OIP vision with stakeholders
- Explore challenges

Executing (60-90)
- Focus organization on updated priorities
- Ensure teams are unblocked and unlocked
- Take initiative on high priority projects
Outcomes

• Degree programs
• Certificate programs
• Program modality
• Department name changes
• CIP code changes
• Bilateral agreements
• Discontinuation
Lessons Learned to Date

• Strong sense of ownership and pride (in their programs/schools)
• Excitement about the new strategic plan
• Innovative and collaborative thinkers and doers
• Needs
  – Desire to better understand program development timelines, policies, processes and funding models
  – Need support to facilitate cross-unit collaboration
  – Look for entrepreneurial/experimental opportunities to build innovative, high-impact academic offerings to meet learners where they are
OIP’s Five Pillars

- Fostering Universitywide Collaboration
- Supporting Faculty/Staff Engagement and Innovation
- Innovating Programs and Delivery
- Accelerating Entrepreneurial Initiatives
- Expanding External Partnerships
1. Fostering Universitywide Collaboration
2. Supporting Faculty/Staff Engagement and Innovation
3. Innovating Programs and Delivery
4. Accelerating Entrepreneurial Initiatives
5. Expanding External Partnerships
What’s Next

**Ongoing**

Strategic and ongoing communication with internal and external constituents share the vision of OIP

Work with the Graduate School and the University College to **review standard operating procedures and guidance documents**

**Fall 2022**

Launch the OIP website with up-to-date SOPs, forms, resources and newsletters

Work with Office of University Interdisciplinary Programs (OUIP) to develop **interdisciplinary courses and curriculum governance structure**.

**Spring 2023**

Create community, resources and professional development to **support interdisciplinary courses and programs**

Work with Office for Faculty Excellence (OFE) to promote and support **faculty engagement in program development**

Work with Office of Assessment and Accreditation on **SACSCOC reaffirmation program-related items**, e.g. dual degrees, MOUs and off-sites

Develop **summer school planning strategy** to promote timely completion
Wolfpack 2030: Powering the Extraordinary
FY22-24 Implementation Plan

Identify the infrastructure to coordinate for-credit/non-credit learning pathways
Develop and implement lifelong learning strategies for the target audience
Develop new certificate offerings to meet the needs of learners
Envision and execute an inclusive process to update the Gen Ed Program
Provide additional opportunities for student engagement in high impact practice
Maximize learning technologies and pursue teaching excellence
Questions
About Rob Dunn

• Joined NC State in 2005
• William Neal Reynolds Distinguished Professor in the Department of Applied Ecology
• Interdisciplinary ecologist (from ant genomics to fermented food pre-history)
• 200 peer-reviewed papers and seven books
Office of University Interdisciplinary Programs

- Faculty Clusters
- Academies
- Integrative Sciences Initiative and Building
- Innovation and Entrepreneurship
- Shelton Leadership Center
- Biotechnology Program
- Coastal Resilience and Sustainability
- Long View
- Plant Sciences Initiative
- University - Museum Partnership
- Wicked Problems
- ?
L'ÉGLISE ET L'UNIVERSITÉ DE LA SORBONNE D'APRÈS UNE GRAVURE DU XVIIÈME SIÈCLE.
60 Departments and More Disciplines
The Land Grant Mission Requires Interdisciplinarity
Problem-Based Research, Education and Engagement are Foundational
But the Nature of the State and World Have Changed
The Average Life is an Urban Life

PUSHWAGNER, SOFT CITY - THERE GOES THE SUN. DRAWN BETWEEN 1968 AND 1975
Change in the Challenges

Circle shows the current cities with the climates most like that future Raleigh will face.
GLOBAL HEALTH CHALLENGES

New emergent pathogens

New vectors

Anopholes gambiae, photo by Alex Wild

New antibiotic resistant pathogens
We need to produce more food that is more nutritious despite climates and conditions that are less conducive to agriculture.
Interdisciplinarity Across Our Mission

Education
- Undergraduate curriculum
- Graduate training

Research and Scholarship
- Addressing complex problems
- Creating interdisciplinary tools

Engagement
- Includes outreach, extension, translation and tech transfer
Two Levels of OUIP

1) Direct reports and dotted lines
2) Interdisciplinarity on the campus at large
Two Levels of OUIP

1) Direct reports and dotted lines
2) Interdisciplinarity on the campus at large
Direct Reports and Dotted Lines

Debbie Acker
Fred Gould
Bob Kelly
Rachel Levy

Science Engagement

Steve Markham
Joshua Pierce
Adrian Percy
Erin Seekamp
Sid Thakur
Direct Reports and Dotted Lines

Debbie Acker
Fred Gould
Bob Kelly
Rachel Levy

Steve Markham
Joshua Pierce
Adrian Percy
Erin Seekamp
Sid Thakur

Science Engagement
Chancellor’s Faculty Excellence Program

- Bioinformatics
- Emerging Plant Disease and Global Food Security
- Geospatial Analytics
- Leadership in Public Science
- Sustainable Energy Systems and Policy
- Carbon Electronics
- Environmental Health Science
- Global Environmental Change and Human Well-Being
- Microbiomes and Complex Microbial Communities
- Synthetic and Systems Biology
- Data-driven Science
- Forensic Sciences
- Global Water, Sanitation and Hygiene
- Modeling the Living Embryo
- Translational Regenerative Medicine
- Digital Transformation of Education
- Genetic Engineering and Society
- High-dimensional Integration of Biological Systems
- Precision Medicine
- Visual Narrative

20 interdisciplinary clusters
80+ faculty hires
Chancellor’s Faculty Excellence Program

TOOLS

Energy
Bioinformatics
Emerging Plant Disease and Global Food Security
Geospatial Analytics
Leadership in Public Science
Sustainable Energy Systems and Policy
Carbon Electronics
Environmental Health Science
Global Environmental Change and Human Well-Being
Microbiomes and Complex Microbial Communities
Synthetic and Systems Biology
Agriculture
Data-driven Science
Forensic Sciences
Global Water, Sanitation and Hygiene
Modeling the Living Embryo
Translational Regenerative Medicine
Humans
Digital Transformation of Education
Genetic Engineering and Society
High-dimensional Integration of Biological Systems
Precision Medicine
Visual Narrative
Water
Climate Change
Global Environmental Change and Human Well-Being
Global Water, Sanitation and Hygiene
Visual Narrative
Lessons from Clusters

1) There are two key models of NC State interdisciplinarity, instrumental and problem-based

2) There is an unrealized potential for synergies among interdisciplinary units

3) Problem-based contexts offer a potential place for such synergies (boundary items)

4) Interdisciplinary units (and colleges) can benefit from cross-cutting endeavors

5) There are still many “orphan” labs

6) Funding interdisciplinarity has paid off (3:1)
Clusters 3.0?
Academies

At NC State, an academy is a **strategically-focused university-level interdisciplinary unit** with the potential for and **goal of working with all 10 colleges**.

The work of the academies will **address all three pillars of the university’s land-grant mission**: excellent teaching, the creation and application of knowledge, and engagement with public and private partners.
Academies

Data Science
Established March 2021

Genetics and Genomics
Established November 2021

Global One Health
Established September 2022
Data Science Academy

Focus

Data science as a language and a critical skill in all sectors

Accelerating data-intensive discovery, teaching and service

Increasing skills, capability and involvement by faculty, students and staff, as well as industry and government partners

Building community, communication and collaboration

Activities

DSC-495-XXX: One-credit project-based courses on 17 topics

Data science consulting: 1-on-1 collaborative support by graduate RAs, in coordination with Libraries

Events: Career expo, DataFest, Hot Topics in Data Science

Interdisciplinary seed grants: $20-50k in collaboration with Research and Innovation (over $300k in first year)

Executive Director
Rachel Levy
Data Science Academy

$1.4M in external gifts and grants in first year

- $1.2M to recruit and mentor 4 two-year postdocs who will study ADAPT course model
- $110K to be part of Capacity Accelerator Network to build workforce capacity in data science for social good
- $60K from Consortium for Mathematics and its Applications for K-12 Data Explorers program
- $50K for national conference with NC State Libraries and Academic Data Science Alliance on data science consulting corps
Genetics and Genomics Academy

**Focus**

Building a greater understanding of genetics and genomics to enhance the flourishing of societies and ecosystems

Leveraging collaborations across NC State life sciences research and training to enhance understanding of the genetic and genomic underpinnings of life on earth, sustain biodiversity and enhance social equity

**Activities**

**Genetics and Genomics Scholars:** Umbrella program across 16 life sciences programs, open to current and incoming PhD students

**Research Interest Groups:** Five universitywide groups meeting regularly to share research interests and exchange ideas

**Events:** Weekly seminar series, annual retreat

**Executive Director**
Fred Gould
Global One Health Academy

Focus

Building upon NC State’s strengths in plant health, animal health, biodiversity health and the health of human societies

Interdisciplinary approach, combining internal resources with current and new partnerships to advance education, research, engagement, innovation and workforce and economic development

Thematic Areas

Research: Driving food and water solutions; combating infectious diseases; and addressing climate change-health disparities

Education: Undergraduate, graduate and leadership

Engagement: In North Carolina and globally

Executive Director
Sid Thakur
GLOBAL HEALTH CHALLENGES

- New emergent pathogens
- New vectors

- Anopheles gambiae, photo by Alex Wild

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NC STATE UNIVERSITY

Genius Germ, Amma Dumitru
Integrative Sciences Building and Initiative

BIOCHEMISTRY
BIOLICAL SCIENCES
CHEMISTRY
ENGINEERING
MEDICINE/VETERINARY MEDICINE
MICROBIOLOGY

Key themes and technologies will serve to connect
Integrative Sciences Initiative

1) A flowering of research based around the key technologies in the building (here we learn from the success of the cores)
2) A new undergraduate first year program that units disciplines (and their examples)
3) A new context for industry partnerships (centered on molecules)
4) Working groups that pull scholars together from across campus and disciplines (here, learning from GES)

Director
Joshua Pierce
We need to produce more food that is more nutritious despite climates and conditions that are less conducive to agriculture.
N.C. Plant Sciences Initiative and Building

Improving the World
Through Plant Science Innovation
The Average User Will be in 2126/2122
The Long View Project

Conversations on the Future, Near and Far
Two Levels of OUIP

1) Direct reports and dotted lines
2) Interdisciplinarity on the campus at large
Challenges/Opportunities
(in response to listening sessions and the occasional angry email)

1) How do we create streamlined scenarios for interdisciplinary courses and degree programs (multiple paths)? Working with Helen Chen

2) How do we (Helen, Rob, Grad. School) create the best scenarios for interdisciplinary graduate programs?

3) What forms of cooperation with ORI make the most sense with regard to nucleating interdisciplinary research?

4) How do we best incentivize and reward faculty who work interdisciplinarily?

5) How do we deal with the radically divergent merit systems in different departments with regard to interdisciplinarity? (e.g., author rules)?

6) What other centralized services do we need to best serve interdisciplinarity while also serving colleges?
Challenges/Opportunities
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A Mess of Extraordinary Museum Partnerships

Grad. Student Led Programs

Efforts of the Libraries

Individual Lab Programs

Science House

Extension

Harlequin's Carnival, Joan Miró
8 joint faculty hires (even more adjunct appointments)  
1.6 million visitors projected this year (one of the most visited natural history museums in the world).
Director of Science Engagement
North Carolina State University
Raleigh, NC

Apply on Tarta.ai  Apply directly on Gigzio.com

Full-time

Job highlights
Identified by Google from the original job post

Qualifications
- Bachelor or Masters Degree from an accredited college or university with five to seven years of experience in a relevant field

Responsibilities
- In addition, they will help connect and expand new programming being developed by individual interdisciplinary programs that report to the Office of University...
OUIP Units, Initiatives and Programs

- Biotechnology Program
- Coastal Resilience and Sustainability Initiative
- Data Science Academy
- Genetics and Genomics Academy
- Global One Health Academy
- Innovation and Entrepreneurship
- Integrative Sciences Initiative and Building
- Long View
- Plant Sciences Initiative
- Shelton Leadership Center
- University - Museum Partnership
- Wicked Problems
An Example Synergy (OUIP + OIP) + new Associate Vice Provost
## Monthly meetings

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OUIP Social meetings
Identifying the Most Sensible Structure
Advisory Committee

Debbie Acker
Matthew Booker
Jennifer Capps
Helen Chen
Adrian Day
Eric Dorfman

Jason Delborne
Kimberly Granger
Rachel Levy
Joshua Pierce
Jamila Simpson
Cranos Williams
Questions