



WHERE CAREER READINESS + UNDERGRADUATE RESEARCH INTERSECT

Understanding career readiness in undergraduate research

Understanding the value of undergraduate research as a set of experiences where students build career readiness skills provides a powerful framework to intentionally connect research experiences to the top competencies employers and graduate schools seek. This perspective highlights the transferable skills, knowledge, and dispositions students learn and build through their undergraduate research experiences.

Below are the eight career readiness skills defined by the National Association of Colleges and Employers (NACE) to equip college graduates for workplace success. CUR's Career Readiness Resource Development Working Group conducted a language and skills mapping exercise to align the learning benefits and skill development gained through mentored undergraduate research with the NACE competencies. In doing so, the committee identified how undergraduate research equips students with the transferable skills most valued by employers, hiring managers, graduate programs, and other post-graduate opportunities—demonstrating that undergraduate research strengthens all eight NACE competencies and supports long-term success.

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Critical Thinking

Analyzing information, understanding situational contexts, and making well-reasoned judgments and decisions to solve problems.



NACE sample behaviors

Make decisions and solve problems using sound, inclusive reasoning and judgment

Gather and analyze information from a diverse set of sources and individuals to fully understand a problem

Proactively anticipate needs and prioritize action steps

Accurately summarize and interpret data with an awareness of personal biases that may impact outcomes

Effectively communicate actions and rationale, recognizing the diverse perspectives and lived experiences of stakeholders

Multi-task well in a fast-paced environment

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Conduct literature reviews

Participate in the research process

Data analysis & interpretation of findings

Articulate in project documents where this skill is being developed

Reflections

Poster creation

Development of personal statements and award applications

How will students benefit from understanding the connection between career readiness and undergraduate research experiences?

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Career readiness is the work of bridging the theoretical and practical aspects of the professional world. Helping them to develop professional identities and acumen is an essential component of a meaningful and effective college experience; it is part of how we should define student success.

Intentionally cultivating career readiness among our students also validates the value of higher education. It empowers students to articulate their skills. It demonstrates the relevance of their education, and it drives real-world outcomes.”

Jeanne Mekolichick
Associate Provost of Academic Affairs
Radford University

Teamwork

Building and maintaining positive collaborative relationships to achieve common goals, appreciating diverse viewpoints.



NACE sample behaviors

Listen carefully to others, taking time to understand and ask appropriate questions without interrupting

Effectively manage conflict, interact with and respect diverse personalities, and meet ambiguity with resilience

Be accountable for individual and team responsibilities and deliverables

Employ personal strengths, knowledge, and talents to complement those of others

Exercise the ability to compromise and be agile. Collaborate with others to achieve common goals

Build strong, positive working relationships with supervisor and team members/coworkers

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Research teams

Development of team charter or team agreement

Project management tasks

Articulate in project documents expectations

Active listening exercises

Transparent team construction

Role clarification and accountability activities

Conflict management activities

Identify and collaborate with external partners

Engage with Communications colleagues for teamwork workshops and exercises

Communication

Exchanging information, ideas, and perspectives effectively with others, both inside and outside an organization.



NACE sample behaviors

Understand the importance of and demonstrate verbal, written, and non-verbal/body language, abilities

Employ active listening, persuasion, and influencing skills

Communicate in a clear and organized manner so that others can effectively understand

Frame communication with respect to diversity of learning styles, varied individual communication abilities, and cultural differences

Ask appropriate questions for specific information from supervisors, specialists, and others

Promptly inform relevant others when needing guidance with assigned tasks

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Dissemination (traditional, TedTalks, 3MT) - multiple opportunities & to varied audiences

Interview prep and experiences

Progress reports and weekly check-ins - both verbal and written

Reverse Career Fairs

Peer review opportunities to practice active listening

Mock interviews, resumes, cover letter exercises, elevator pitches

Engage with campus colleagues - such as the Writing Center, colleagues in the Communications department, etc.

Workshops and trainings on the art of storytelling

Include students in hosting campus speakers from prep to thank you cards

Developing research pitches

Activities focused on delivering and receiving feedback

What is the value of understanding career readiness within undergraduate research?

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Highlighting the value of career readiness within undergraduate research is essential to ensuring that all learners are equipped to thrive in the world of work. Undergraduate research provides a strong foundation for advancing career mobility by building critical thinking, communication, and problem-solving skills. It also offers powerful mentorship opportunities with faculty, which help students clarify their goals, build confidence, and translate academic experiences into career competencies.

Wil Preston
Director of Career Communities
Towson University

Leadership

Recognizing and leveraging personal and team strengths to achieve organizational goals.



NACE sample behaviors

Inspire, persuade, and motivate self and others under a shared vision

Seek out and leverage diverse resources and feedback from others to inform direction

Use innovative thinking to go beyond traditional methods

Serve as a role model to others by approaching tasks with confidence and a positive attitude

Motivate and inspire others by encouraging them and by building mutual trust

Plan, initiate, manage, complete and evaluate projects

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

UR ambassador programs

Community-engaged UREs

Civic engagement opportunities

Nested mentor models - peer mentorship

External partner engagement

Delivering and engaging with team updates

Exercises that ask students to reflect on leadership skills gained in reflections, cover letters, interviews

Committee and organization participation - IRB/IACUC - UR program positions, advisory boards, student organizations

Structured advice to peers - in networking situations or "I wish I would have known" videos or sharing peer mentorship experiences

Opportunities for students to practice delivering and receiving feedback

Opportunities for project management activities

Professionalism

Understanding effective work habits, acting in the best interest of the workplace, and demonstrating integrity.



NACE sample behaviors

Act equitably with integrity and accountability to self, others, and the organization

Maintain a positive personal brand in alignment with organization and personal career values

Be present and prepared

Demonstrate dependability (e.g., report consistently for work or meetings)

Prioritize and complete tasks to accomplish organizational goals

Consistently meet or exceed goals and expectations

Have an attention to detail, resulting in few if any errors in their work

Show a high level of dedication toward doing a good job

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Student expectations articulated in project handbooks or documents

Mentor modeling behaviors in interactions with various stakeholders

Student participation in interactions with various stakeholders

Community-engaged UREs

Conference travel and navigation

Develop a professional social media presence + Mentor modeling on professional social media

Accountability check-ins

Mock interviews, resumes, cover letter exercises, elevator pitches, engage with Career Center workshops

UR ambassador programs

Etiquette presentations/dinners from Career Services

Student onboarding as employees with HR

Professional presentation of self - including professional dress

Efforts to advance UR across and beyond campus

Activities that highlight ethical practices

How will students benefit from understanding the connection between career readiness and undergraduate research experiences?

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Through different stages of life, it's common for all of us, not just students, to change our trajectories. For example, an undergraduate student completing a research experience may think they want a career in research but may end up going into industry after college. This change may be temporary, a desire for a gap year between undergraduate and graduate school or longer term due to a shift in goals or priorities. Regardless of what comes next for students, providing explicit instruction and interventions to help develop and hone career readiness skills provides students with terminology, competencies, and experiences to share with future employers or committees.

Amanda MacDonald
Assistant Director of Undergraduate Research Initiatives
Virginia Polytechnic Institute & State University

Career + Self Development

The ability to identify strengths and weaknesses, pursue continuous learning, and proactively navigate career opportunities.



NACE sample behaviors

Show an awareness of one's strengths and areas for development

Identify areas for continual growth while pursuing and applying feedback

Develop plans and goals for one's future career

Professionally advocate for oneself and others. Display curiosity; seek out opportunities to learn

Assume duties or positions that will help one progress professionally

Establish, maintain, and/or leverage relationships with people who can help one professionally

Seek and embrace development opportunities. Voluntarily participate in further education, training, or other events to support one's career

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Goal-setting exercises

Career visioning exercises

Self-assessments (check with your Career Center for resources)

Development of personal statements and award applications

Activities that help to develop professional identities

Pre-flections & Reflections

Reporting - progress and final - oral and written

Networking Opportunities

Mock interviews, resumes, cover letter exercises, elevator pitches, LinkedIn profiles

Civic engagement opportunities

UR ambassador programs

Attend Career Services events or allied campus trainings, such as IRB/IACUC, HR, Sponsored Programs, etc.

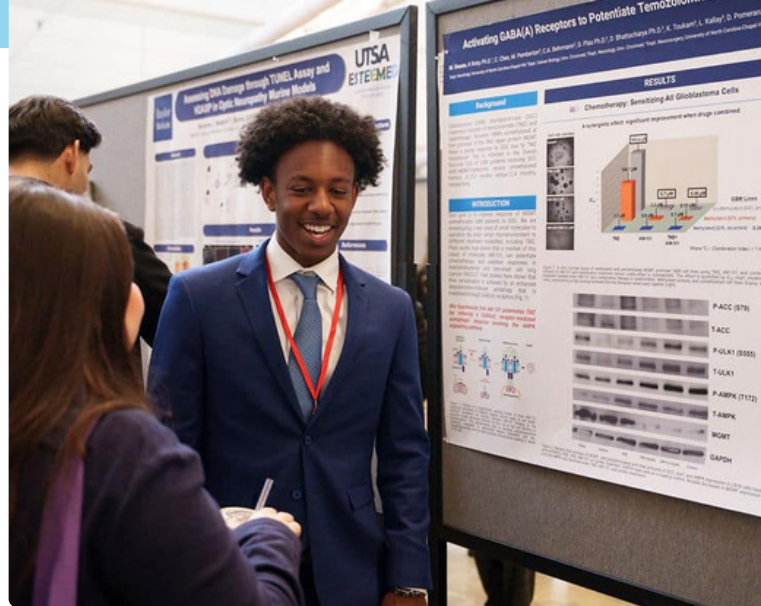
Conference travel and navigation

Activities to develop strategies for navigating challenges and learning about self

Self-reflections directed to exploring personal and professional values

Equity + Inclusion

Demonstrating the awareness, knowledge, attitudes, and skills needed to work equitably and inclusively with diverse populations.



NACE sample behaviors

Solicit and use feedback from multiple cultural perspectives to make inclusive and equity-minded decisions

Actively contribute to inclusive and equitable practices that influence individual and systemic change

Advocate for inclusion, equitable practices, justice, and empowerment for historically marginalized communities

Seek global cross-cultural interactions and experiences that enhance one's understanding of people from different demographic groups and that leads to personal growth

Keep an open mind to diverse ideas and new ways of thinking

Identify resources and eliminate barriers resulting from individual and systemic racism, inequities, and biases

Demonstrate flexibility by adapting to diverse environments

Address systems of privilege that limit opportunities for members of historically marginalized communities

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Reflections - awareness of self, biases, practices

UR abroad experiences & projects

Community-engaged UREs

Industry speakers - especially those that speak to bringing the best minds to the most challenging problems

Often present in community-engaged and action-oriented research & creative scholarship

Dissemination opportunities with various audiences

Mock interviews, resumes, cover letter exercises, elevator pitches

Round robin reporting to encourage all voices
First-year CUREs

Including first-year students in research teams
Include discussions of societal implications of research

Activities that develop cultural competencies
Partner with Career Services on salary negotiation techniques workshops

Activities or environments that engage students with difference - multi-generational environments, unfamiliar settings

Technology

Ethically understanding and using technology to improve efficiency, complete tasks, and achieve goals.



NACE sample behaviors

Navigate change and be open to learning new technologies

Use technology to improve efficiency and productivity of their work

Identify appropriate technology for completing specific tasks

Manage technology to integrate information to support relevant, effective, and timely decision-making

Quickly adapt to new or unfamiliar technologies. Manipulate information, construct ideas, and use technology to achieve strategic goals

Undergraduate research activities that build/develop career competencies (for the classroom, lab, project)

Exercises to help students navigate databases to find information

Activities to cultivate information and digital literacy - engage with librarians

Use of citation management systems

Use industry standard software, materials, and techniques

Leverage industry collaboration software for project management and conferencing technologies

Industry standard data collection, analysis, and interpretation technologies

Generation and use of LinkedIn profiles

Ethical and appropriate use of AI

Activities focused on data security and protection

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