

Cooperative Extension Specialist in Science Communication

Developed and proposed by: The Science Literacy and Critical Thinking Program Team identified science communication as a high-priority, cross-cutting need for UC ANR, articulating the statewide Extension rationale. UC Davis Department of Human Ecology identified science communication as a high campus priority and framed the position's academic fit within human-centered, community-engaged research and teaching mission.

Position title: Science Communication Specialist

Headquarter location and coverage area: Department of Human Ecology (UC Davis), with statewide programmatic coverage. The department's interdisciplinary mission and scholarship make it a strong academic home for a cross-cutting position focused on communicating to publics to complex "wicked" problems spanning agriculture, food, water, climate, health, and youth and community well-being. Department faculty and graduate groups (Human Development, Community Development, and Geography) provide a rich, ready-made network of collaborators, graduate students, and research infrastructure on which the Specialist can draw.

Position overview, briefly describe: (a) The Science Communication Specialist will develop a program focused on adapting, implementing, evaluating, and extending effective practices that promote critical thinking, public engagement with science, and confidence in science across agriculture and food systems, natural ecosystems, youth and communities, and equity-related challenges affecting access to and participation in science for diverse audiences and communities. The position will advance effective Extension methods to help people across the lifespan find, interpret, evaluate, and use science information in ways that improve well-being and support economic prosperity. This work strengthens Extension-based frameworks, with UC ANR as a trusted, research-informed partner in evidence-based decision making. (b) Terminal degree in science communication, education, human development, psychology, public health, communication, or related field, and training/experience in applied and experimental research, evaluation, and Extension or community-engaged scholarship related to science communication. (c) Headquartered in the UC Davis Department of Human Ecology, the Specialist will work with the Scientific Literacy Program Team and relevant UC ANR advisors, specialists, and educators across program areas, and collaborate with campus- and county-based colleagues to develop research, training, communication tools, and evaluation approaches for use across the UC ANR network.

Justification: (a) Needs: Widespread shifts in trust in science, as well as general science literacy, have been laid bare in recent years. Effective and creative science communication can enhance health and well-being for all community members across the lifespan and can provide secondary economic benefits. Yet, Californians increasingly must interpret complex, contested, and policy-relevant science in areas central to UC ANR's mission, including food systems, natural resources, climate resilience, health, youth development, and technology. At the same time, misinformation, disinformation, and AI-mediated algorithms make it harder for the public to judge what science information is credible (NASSEM, 2025). Second, research shows that public trust in science is not fixed and may be changed through effective communication. Trust is shaped by the interaction of audience, source, message, and context, and is strengthened through transparency, dialogue, integrity, inclusion, and culturally responsive communication rather than one-way dissemination alone (Intemann, 2023; Reif et al., 2024; Iordanou et al., 2026). Third, participation, belonging, identity, and self-efficacy are strengthened when learning experiences are inclusive, culturally responsive, and connected to learners' lives, especially for groups

historically underserved in STEM (Çolakoğlu et al., 2023; Ludwig et al., 2024; Barajas-Salazar et al., 2025). Effective science communication is now foundational to whether research-based knowledge is understood, trusted, and used across program areas. **(b) Outcomes/Impact:** This position will strengthen UC ANR's public value by improving how individuals, communities, and organizations find, interpret, evaluate, and use science information. Near- and medium-term outcomes include stronger critical thinking, more effective and culturally responsive communication practices among UC ANR academics and partners, and more evidence-informed decisions. Over time, the position can support stronger STEM learning pathways, broader public science engagement, and greater confidence in UC ANR as a trusted, research-informed institution. In a 20-year horizon, success would include tested science communication frameworks, shared evaluation tools, stronger tailored multilingual and culturally responsive engagement practices, and greater UC ANR capacity to address emerging challenges involving climate, food systems, natural resources, health, and technology. **(c)** Science communication is a cross-cutting capacity that supports all ANR Vision 2040 core areas of focus and the cross-cutting challenges. This position directly advances Vision 2040's emphasis on meaningful engagement with every Californian, resilience, innovation, and practical solutions to current challenges.

Extension: The Specialist will build a statewide Extension program that strengthens science communication practice across program areas. Effective science communication is already happening across the Division, wherein advisors, specialists, and county-based educators do skilled work in their content domains, often under conditions of contested public discourse, with diverse audiences, and with real impact. That practice is rarely documented in ways that allow it to be tested, refined, and shared across the network because no academic in the Division currently has it as their primary scholarly focus. The Specialist will: (i) study, codify, and amplify effective science communication practices already occurring across UC ANR, turning distributed practical knowledge into a stronger empirical and professional base for the Division; (ii) use that base, together with external evidence from science communication and behavioral research, to develop the training, infrastructure, and resources that help the rest of the network adapt effective practices to their local contexts and content domains; and (iii) bring emerging methods and findings on audience analysis, misinformation, AI-mediated communication, and evaluation of public engagement into ANR through professional development, communities of practice, demonstration projects, and direct collaboration with advisors and specialists.

Core activities will include professional development for UC ANR academics, staff, and partners on evidence-based science communication, audience analysis, misinformation response, communication about uncertainty, culturally responsive and identity-affirming practice, and evaluation of public engagement outcomes. The Specialist will develop adaptable toolkits, training modules, webinars, workshops, communities of practice, and demonstration projects that can be used across local and statewide contexts. The Specialist will also work with county- and campus-based academics to co-design and test public-facing communication strategies related to climate adaptation, agriculture and food systems, water, wildfire, natural resource stewardship, youth STEM pathways, nutrition and health, and evidence-based public decision making. Key clientele will include UC ANR advisors and specialists; county-based educators and volunteers; 4-H youth and other youth-serving organizations; schools, afterschool and expanded learning programs; growers, ranchers, land managers, and producer groups; state and local agencies; Tribal and Indigenous partners; and community-based organizations serving multilingual, immigrant, rural, low-income, and other underserved communities. The Specialist's Extension approach will emphasize collaborative needs assessment, participatory program

design, testing and refinement of communication materials, train-the-trainer models, program evaluation, and the development of practical resources that can be adapted locally and scaled statewide.

Research: The Specialist will lead an applied research agenda focused on several connected areas: (1) *Public trust in science*, including how trust varies by issue, audience, messenger, and communication setting, and how it can be strengthened. (2) *Science communication strategies*: design and evaluation for contested and policy-relevant topics, including the communication of uncertainty, risk, evidence, and tradeoffs. (3) *Misinformation, disinformation, and AI-mediated science communication*: including how people encounter and evaluate science information in changing digital environments. (4) *Evidence-informed public decision making and science-policy communication*, including Extension's role as a trusted intermediary between science knowledge and community or policy action. Over the next 20 years, this research will be shaped by generative AI, climate adaptation, debates over food and natural resource management, increasing demand for multilingual and culturally responsive communication in polarized public policy environments. Publication outlets include *California Agriculture*, UC ANR publications and reports, and external journals (e.g., *Science Communication*, *Public Understanding of Science*, *Journal of Applied Communications*, and *Frontiers in Education*).

UC ANR network: This position aligns with the ANR Vision 2040 and would significantly augment UC ANR's statewide capacity in science communication. (a/c) UC ANR has strong disciplinary expertise across agriculture, natural resources, youth development, nutrition, and community well-being, but it lacks a dedicated statewide Specialist focused on evidence-based science communication, public trust in science, misinformation response, informal science learning, and evaluation of communication outcomes. (b) The Specialist will collaborate with UC ANR advisors and specialists across program areas, while contributing to efforts in climate resilience, youth STEM pathways, public education, and community engagement. The position strengthens the reach and effectiveness of many UC ANR programs at once.

Network external to UC ANR: The Specialist will collaborate with a broad external network that includes UC and non-UC scientists, state and local agencies, Tribal governments and Tribal-serving organizations, county offices of education, community colleges, community-based organizations, extension peers in other land-grant universities, and practitioners working at the intersection of science communication, public engagement, and informal STEM learning. The nature of these collaborations should include participatory research, advisory groups, joint professional development, co-developed communication resources, pilot projects, externally funded research and extension initiatives, and dissemination partnerships that expand the reach and relevance of UC ANR work.

Support: (a) Transportation will be covered by ANR allocations and CE contributions from Human Ecology. (b) Human Ecology will provide office and lab space for this position. A departmental space policy allows for additional space as needed (e.g., research scientists, students). (c) Supplies/equipment will be covered by ANR allocations and CE contributions from Human Ecology. (d) Initial research costs will be provided via CAES start-up funding and ANR allocations. The Specialist is expected to apply for intra- and extramural grants to support future research/extension programming.

Other support: Historically, there have been federal funding sources that relate to science education and communication (e.g., USDA, NSF, IES). As priorities shift, foundations and other philanthropic partners may step in to support this type of research.