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## A Climate Research Intensive Undergraduate Program Pivot During a Pandemic

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Increasing temperatures in the Arctic are thawing permafrost, changing vegetation, and increasing wildfires at unprecedented rates. Climate change is also affecting other regions in the United States and in the world. This presentation describes a climate change research immersive program born from a partnership between an international climate research center and a science, technology engineering and mathematics (STEM) program in a Southern California community college. For four years, the Santa Ana College Mathematics, Engineering, Science Achievement (MESA) program and the University of Alaska Fairbanks (UAF) International Arctic Research Center brought groups of science and engineering students North to witness climate change in the Arctic and conduct original research on an aspect of the changes. The COVID 19 pandemic posed a challenge and halted this collaborative work; however in 2021 gave us the impetus to creatively continue in providing a research intensive experience to first generation college students from groups underrepresented in STEM fields, through a blended on-line and in-person Summer Climate Research Intensive Course that examines the ecological impacts of climate change through hands-on field research. Student groups in Santa Ana, California and Fairbanks, Alaska met for instruction, training and collaborative work online through video conference, and completed comparative field work in their two different forest ecosystems with the help of local scientist mentors at location. Students gained science skills and experience in research question framing, ecological fieldwork, laboratory procedures, collaboration, data analysis and communication, as they designed and conducted their research projects alongside professional climate change scientists. All students completed a research project and developed a project poster which they presented at a blended science symposium and plan to present at other

professional conferences. The Course was jointly sponsored by the Arctic and Earth STEM Integrating GLOBE and NASA program (UAF International Arctic Research Center), the Santa Ana College Math, Engineering and Science Achievement (MESA) Program, and the UAF Climate Scholars Program (UAF Honors College). Lessons learned and evaluation results will also be shared.