

Navajo Technical University to establish centre for advanced manufacturing



Advanced manufacturing major Aaron Sansosie operates machinery in NTU's Center for Digital Technologies. Student research projects will increase with the construction of a Center for Advanced Manufacturing (Courtesy Navajo Technical University)

Navajo Technical University, based in Crownpoint, New Mexico, USA, has been awarded a \$3.5 million grant from the National Science Foundation for the establishment of the NTU Center for Advanced Manufacturing. The funding provides the foundation for the development of the centre, which will aim to enhance education, foster research and stimulate economic development. It was stated that the centre's emphasis will be on 3D modelling and simulation, polymer and metal Additive Manufacturing, and advanced manufacturing post processing techniques.

H Scott Halliday, the Director of NTU's Center for Digital Technologies, stated, "The goal for the centre is to provide opportunities for students so they can learn and gain experience in a working environment. We also plan to elevate the centre's research capabilities, and provide metrology and testing services to industry and other institutions."

Halliday stated that he expects the centre will appeal to visiting researchers, which he hopes will increase the number of academic partners for NTU. He reported that several universities have already made a commitment to collaborate with NTU, including the University of Nebraska's Mechanical and Materials Engineering department, the University of Utah's Multiscale Mechanics & Materials Laboratory, the Colorado School of Mines, and Montana Technological University. The centre has also collaborated with the University of New Mexico's Indigenous Design and Planning Institute through NTU's building information modelling programme.

A further focus of the centre's activities will be on materials testing and characterisation and metrology. NTU has been awarded a \$1 million grant from the U.S. Department of Commerce, with matching funds of \$1.5 million from the Navajo Nation, to build a metrology and materials testing centre within the Center for Advanced Manufacturing, which Halliday stated he plans to make into a certifiable lab to assist in student learning.

The Navajo Nation's Division of Economic Development stated that, with its commitment of \$1.5 million toward the centre, it hopes to generate five-hundred high-tech, high-wage jobs in partnership with industries like Boeing Corporation's Metal AM Technologies in El Segundo, California, USA. NTU is also looking to bring in opportunities with companies such as Sigma Labs, LLC in Santa Fe, New Mexico, Optomec, LLC in Albuquerque, New Mexico, and V&M Global Solutions, LLC in Ojo Caliente, New Mexico.

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