MEMORANDUM

TAB M

May 8, 2020

Adoption of Policy R430, *Deep Technology Talent Initiative*

During the 2020 Legislative General Session the Legislature passed SB 96, which establishes the Deep Technology Talent Initiative to be administered by the Utah Board of Higher Education.

The Deep Technology Talent Initiative provides an opportunity for USHE institutions to compete for funding towards innovative educational programs designed to prepare students to be workforce participants in jobs requiring deep technology skills. SB 96 defines "Deep Technology" as technology that leads to new products and innovations based on scientific discovery or meaningful engineering innovation related to one or more of the following:

- Advanced materials
- Artificial intelligence
- Augmented and virtual reality
- Biotechnology
- Photonics
- Quantum computing
- Robotics
- Secure computing
- Other emerging technologies as defined by the advisory council

Applications for initiative funding will first go to an advisory council, made up of representatives from legislature, GOED, the Board, and industry experts. The advisory council will review and rank applications and recommend to the Board which applicants should receive funding and the award amount. The Board will make final decisions based on the council's recommendations and the program criteria. This policy establishes the Deep Technology Talent Initiative and outlines criteria and procedures for administering the program.

Commissioner's Recommendations

The Commissioner recommends the Board approve R430, *Deep Technology Talent Initiative* effective immediately.

Attachments

R430, Deep Technology Talent Initiative[1]

R430-1 Purpose: Respond to the need for deep technology talent across Utah by establishing the deep technology talent initiative to facilitate collaborations for new or expanded, multidisciplinary programs or stackable credential programs in both undergraduate and graduate studies that prepare work in jobs requiring deep technology skills. Establish procedures by which institutions may apply for and be awarded funding to create or expand programming in deep technology

R430-2 References

2.1 Utah Code Title 53B, Chapter 36, Part 3, Deep Technology Initiative

R430-3 Definitions

3.1 "Advisory Council" The Deep Technology Talent Advisory Council created in Section 4 of this policy

3.2 "Deep Technology" Technology that leads to new products and innovations based on scientific discovery or meaningful engineering innovation. "Deep technology" may include technology that leads to new products and innovations related to one or more of the following:

3.2.1 Advanced materials

3.2.2 Artificial intelligence

3.2.3 Augmented and virtual reality

3.2.4 Biotechnology

3.2.5 Photonics

3.2.6 Quantum computing

3.2.7 Robotics

3.2.8 Secure computing

[1] Adopted XXX; amended XXX

3.2.9 Other emerging technologies as determined by the Commissioner or advisory council.

3.3 "Institution": The University of Utah, Utah State University, Southern Utah University, Weber State University, Snow College, Dixie State University, Utah Valley University, or Salt Lake Community College.

R430-4 Deep Technology Advisory Council

4.1 There is established a Deep Technology Talent Advisory Council to make recommendations to the Board as it administers the Deep Technology Initiative. All members shall be appointed for four year terms except where otherwise noted in the membership outline. The advisory council shall consist of the following members:

4.1.1 Two members who have extensive experience in deep technology in the private sector appointed by the president of the Senate (one 2-year term, one 4-year term);

4.1.2 Two members who have extensive experience in deep technology in the private sector appointed by the speaker of the House of Representatives (one 2-year term, one 4-year term);

4.1.3 A representative of the Board appointed by the chair of the Board;

4.1.4 A representative of the Governor's Office of Economic Development appointed by the executive director of the Governor's Office of Economic Development;

4.1.6 One member of the Senate appointed by the president of the Senate;

4.1.7 One member of the House of Representatives appointed by the speaker of the House of Representatives;

4.1.8 Other specialized industry experts who may be invited by a majority of the advisory council to participate as needed as nonvoting members.

4.2 Successor advisory council members upon appointment or reappointment shall each serve a term of four years. When a vacancy occurs in the membership for any reason, the replacement shall be appointed by the initial appointing authority for the unexpired term. An advisory council member may not serve more than two consecutive terms.

4.3 A vote of a majority of the advisory council members is necessary to take action on behalf of the advisory council. The duties of the advisory council include reviewing, prioritizing, and

making recommendations to the Board regarding proposals for funding under the deep technology talent initiative.

R430-5 Deep Technology Talent Initiative

5.1 Subject to appropriations from the Legislature, there is established a deep technology talent initiative that provides funding for expanded programs in deep technology. The initiative should facilitate collaborations that create expanded, multidisciplinary programs or stackable credential programs in both undergraduate and graduate studies that prepare students to be workforce participants in jobs requiring deep technology skills.

5.2 An institution of higher education seeking to partner with a participating employer to propose a new program shall submit a proposal to the Commissioner's Office, in a form approved by the Commissioner, which contains the following elements:

5.2.1 A description of the proposed program in deep technology that demonstrates the program will:

5.2.1.1 Be responsive to Utah's deep technology talent needs by involving industry in the project's design;

5.2.1.2 Be a partnership that includes at least one participating employer and at least one institution of higher education; and

5.2.1.3 Address a previously unmet state need related to deep technology.

5.2.2 An estimate of:

5.2.2.1 Student enrollment in the program;

5.2.2.2 The academic credit or credentials will be provided by the program; and

5.2.2.3 Occupations for which graduates will be qualified.

5.2.3 Evidence that each participating employer is committed to participating and contributing to the program by providing any combination of instruction, extensive workplace experience, or mentoring.

5.2.4 A description of any resources each participating employer will provide in the program.

5.2.5 The amount of funding requested for the program, including justification for the funding.

5.3 The Commissioner shall provide all proposals to the advisory council and the advisory council shall review and prioritize each proposal received and recommend to the Board whether the proposal should be funded, including the recommended amount of funding, using the following criteria:

5.3.1 The quality and completeness of the elements of the proposal described in Section 5.2.

5.3.2 To what extent the proposed program will:

5.3.2.1 Expand the capacity to meet state or regional workforce needs related to deep technology;

5.3.2.2 Integrate deep technology competency with disciplinary expertise;

5.3.2.3 Identify a faculty member or other individual who has expertise and a demonstrated willingness to lead the proposed program;

5.3.2.4 Incorporate internships or significant project experiences, including team-based experiences;

5.3.2.5 Identify how industry professionals would participate in curriculum development and teaching;

5.3.2.6 Create partnerships with other higher education institutions and industry; and

5.3.2.7 Be cost effective.

5.3.3 Other relevant criteria as determined by the advisory council, the Commissioner, or the Board.

5.4 Subject to Section 5.5 and the other provisions of this policy, on or before September 1 of each fiscal year, the Board shall review the advisory council's recommendations and may provide funding for deep technology programs using the criteria described in Section 5.3.

5.4.1 Before the Board may provide funding for one or more deep technology programs for fiscal year 2021, on or before October 1, 2020, the Board shall provide written information

regarding the proposed funding to, and shall consider the recommendations of, the Higher Education Appropriations Subcommittee.

R430-6 Reporting Requirements

6.1 Each institution of higher education that receives funding under this section shall, in a form approved by the Board, annually provide written information to the Board regarding the activities, successes, and challenges related to administering the deep technology program, including:

6.1.1 Specific entities that received funding under this section;

6.1.2 The amount of funding provided to each entity;

6.1.3 The number of participating students in each program;

6.1.4 The number of graduates of the program;

6.1.5 The number of graduates of the program employed in jobs requiring deep technology skills.