SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
ACADEMIC AFFAIRS
COMMITTEE RECOMMENDATION

SUMMARY

Lake Area Technical College

Substantive Program Application

Associate of Applied Science

Production Agriculture

COMMITTEE RECOMMENDATION

The Committee on Academic Affairs and Institutional Effectiveness ("Committee") met on 9/25/2025 to consider the merits of the above application. After review, the Committee makes the following action recommendation to the Board of Technical Education:

☒ Approval
☐ Disapproval
☐ Deferral
☐ Other:

PROGRAM DESCRIPTION

Institution	Lake Area Technical College
Program Identifier Code (If applicable)	
Program Title	Production Agriculture
Program Award Level: Check all that apply	☐ Short-Term Certificate ☐ Long-Term Certificate ☐ Diploma ☒ Associate of Applied Science
CIP Code (6 Digit)	1.0301
Projected Implementation Date	8/24/2026
Location	☒ Main Campus ☐ Other:

SUMMARY

Type of Substantive Change	☐ New Program (B.1.1) ☒ Significant Curriculum Modification (B.1.2) ☐ Other:

Describe the change the institution is seeking approval of.

Lake Area Technical College (LATC) seeks approval for a curriculum modification and program re-organization to its current Agriculture AAS program and connected options, for full implementation in Fall 2026. Currently, LATC offers one Agriculture AAS degree which covers multiple aspects of the agriculture industry. The affiliated options, housed under the Agriculture program's umbrella, include six areas of emphasis that all share a common first year curriculum. However, the LATC Agriculture advisory boards recommended significant programmatic changes to address the growing industry demand for more specialized training and employability of students in ag-related fields.

LATC is ready to complete a comprehensive overhaul of this program's curriculum to better meet industry needs. The college is applying for four new agriculture programs: Precision Agriculture Technology, Production Agriculture, Agriculture Business, and Livestock Production & Management. This application specifically seeks the approval of the Production Agriculture program.

The agriculture production career field ranges widely from farm and ranch workers or managers to livestock buyers and feedlot supervisors to farm and ranch owners or grain storage directors and supervisors. Graduates from the Agriculture Production degree will have the capacity to own and operate or to work on an agricultural operation with crops and livestock. The degree design incorporates knowledge and technical skills around safety, marketing, law and construction to prepare students for the diverse realities as a producer, in addition to the science and practices of raising animals and crops.

CRITERION 1: MISSION

The program aligns with the system's mission and strategic priorities.

1.1. The program aligns with the system's mission of preparing a technically skilled workforce prepared to serve the state of South Dakota and its regions.
1.2. The program aligns with the system's strategic priorities.

1.1. Describe how the proposed program aligns with the system's mission.

The mission of Lake Area Technical College, as part of the South Dakota Technical College System, is to provide superior, comprehensive technical education that changes lives and launches careers. The structure of LATC's proposed Livestock Production & Management program ensures that students can complete an AAS college degree aligned with industry expectations while remaining affordable and offering a strong return on the investments students make into their college education.

The updated and re-organized Agriculture programs at LATC – Precision Agriculture Technology, Agriculture Business, Production Agriculture, Livestock Production & Management, and Natural Resources Management (an existing program that is currently part of the college's Agriculture Department) – will reflect the structure seen in public administration of agriculture and natural resources programs in South Dakota. Administering these programs together efficiently utilizes the college's resources and emphasizes for students the intersections and complexities of production, business, technology, and sustainability in agriculture and natural resources, no matter the specific career path they take within the industry.

CRITERION 2: DEMAND

The program leads to meaningful employment, adequate student enrollment, and/or fulfills needs not being met by existing education and training providers.

2.1. The program leads to high-wage occupations that have an average/mean wage greater than the median wage across all occupations.
2.2. The program leads to high-demand occupations that have project annual openings (a measure of demand for workers) greater than the average across all occupations or is shown as an economic and/or labor market emerging field for the state of South Dakota and its regions.
2.3. The program's student enrollment is adequate to justify program existence.
2.4. The program fulfills a demand not being met by existing education and training providers in the region and/or state.

2.1. Describe the wage projections for occupations associated with the proposed program by completing Appendix 2.A.

2.2. Describe the demand projections for occupations associated with the proposed program.

A. Complete Appendix 2.A.

B. If an emerging field for the state of South Dakota, describe the field. Letter(s) of support, detailing demand, should be attached as appendices.

Production Agriculture is at the core of South Dakota's state identity. Though it is not an emerging field, it certainly is an evolving field, advancing through research, technologies, and best practices over time. These advancements have supported farmers and ranchers with increased yields and stronger conservation practices. The three letters of support from members of the LATC Production Agriculture Advisory Board speak to the need to continue the program option at Lake Area Tech.

2.3. Describe projected student enrollment for the proposed program by completing Appendix 2.B.

2.4. Describe how the proposed program fulfills a demand not being met by existing education and training providers in the region and/or state.

A. Identify closely related program(s) that currently exist at other public higher education institutions in the system or state. If none, write "None."

South Dakota State University (SDSU) in Brookings, SD offers undergraduate degrees (BS) in a variety of Agriculture systems and specializations. SDSU Capital City Campus provides an Associate of Science in Agriculture in Pierre, SD. Southeast Technical College in Sioux Falls, SD offers an AAS degree in Business Administration with Agriculture Emphasis and agriculture-related programs, such as Horticulture Technology. Mitchell Technical College in Mitchell, SD offers AAS degrees in ag-related fields and houses the South Dakota Center for Farm/Ranch Management.

B. If applicable: Describe the ways in which the demand is not currently being met by the aforementioned program(s) and provide justification as to why the program should be approved by addressing the following conditions that warrant duplication (BP 303.2). Select all that apply.

☒ Unmet Demand (C.5.1.1) ☒ Increases Student Access (C.5.1.3)

☐ Industry Partnership (C.5.1.2) ☐ Other:

I. For each condition selected above, provide a brief justification.

Unmet Demand

Production Agriculture refers to the practice of cultivating crops and raising livestock for the purpose of producing food, fiber, fuel, and other agricultural products. In South Dakota, Production Agriculture careers focus on feeding growing world populations, while also conserving resources. This involves managing land and soil, water, inputs, and processes to efficiently grow crops and raise animals, ultimately contributing to the food supply and economy of our regional, state, national and international markets.

With an aging agricultural workforce, young professionals are needed to take over the next generation of ag production in South Dakota and continue the strong tradition of producing a safe and secure food supply. While global food demands increase, competent and skilled producers will play a critical role in the future of food production and the vitality of South Dakota's rural economy. The updated Production Agriculture program at Lake Area Tech will help young farmers and ranchers to navigate the challenges in getting started with capital resources and transitioning into generational operations. The technical coursework will support students in building knowledge, whether they plan to work in a traditional or niche agricultural operation.

Additionally, opportunities exist as managers within family and corporate farms and ranches, cooperatives and as self-employed agriculture specialists. Local producer Tim Toennies, owner of Toennies' Cattle Company wrote that "the demands on today's producers are higher than ever. From managing tight margins and volatile markets to staying ahead of environmental regulations and adopting new technology, production agriculture requires a wide range of practical and business-oriented skills. Expanding the Ag Production program to offer more hands-on training in areas like equipment operation and maintenance, crop management, soil health, and animal husbandry is critical to ensuring our next generation of producers is up to the task." As producer Toennies indicated, the Production Agriculture field demands a multi-faceted approach and highly trained workforce.

Increases Student Access

Additionally, the overall programmatic change in the LATC Agriculture program from one AAS degree to four AAS degrees (Production Agriculture, Agriculture Business, Precision Agriculture Technology and Livestock Production & Management) allows LATC students greater expertise for the newer technical employment positions that represent the forefront of agriculture in South Dakota. While pursuing one of the four agriculture degrees, LATC students may also choose classes from any of the three other degrees to complement their learning experiences and expand their job preparedness. With several optional courses built into all five degrees (also including Natural Resources Management), Lake Area Tech students will be excellently prepared for a wide range of agricultural employment prospects. This expanded educational access allows even more career opportunities for our agriculture students.

CRITERION 3: DESIGN

The program's learning assessment strategy, program of study, and delivery methods are designed to provide students with the necessary competencies, as demonstrated through program learning outcomes.

3.1. The program is aligned to competencies, as demonstrated through program learning outcomes, that are developed with and continually validated by relevant stakeholders.
3.2. The program has a learning assessment strategy to validate student mastery of the program learning outcomes.
3.3. The program has an integrated program of study designed to develop and reinforce the program learning outcomes.
3.4. The program, when appropriate, includes a work-based learning component that develops and reinforces the program learning outcomes.
3.5. The program, when appropriate, offers flexible delivery methods to increase student access.

3.0. Describe the proposed program's alignment with the program award level requirements established in BP 301.1.

A. Does the program align with the requirements?

☒ Yes
☐ No (Requesting Exemption)

B. If no: Provide a detailed rationale for program exemption. Specify which requirement(s) in BP 301.1 are not met; cite specific policy sections (e.g., B.3.4), when appropriate. If external organizations are involved (accreditation, regulatory, licensure, etc.), reference the organization name(s), specific requirements (including citations), and a justification for why the exemption should be approved.

3.1. Describe the program learning outcomes.

A. Provide a list of program learning outcomes for each proposed award level. Learning outcomes should be specific to the program.

1. Develop crop production plans.
2. Operate farm equipment and agriculture chemical application equipment.
3. Prepare budgets and financial documents using farm financial management principles.
4. Utilize Production Agriculture to improve efficiency, crop yields, and resource management on the farm.
5. Develop marketing plans using commodity marketing strategies.
6. Apply agricultural law, compliance regulations, and workplace safety protocols to
7. a production operation.
8. Demonstrate construction and repair of farm structures and equipment.

B. Describe the how the program learning outcomes were developed and validated.

Production Agriculture program learning outcomes were developed by LATC faculty and administrative staff. Then they were thoroughly discussed and approved by the Production Agriculture Advisory Board members and industry partners in South Dakota.

3.2. Describe the program's learning assessment strategy.

A. Describe how students will demonstrate mastery of the program learning outcomes. Description should be specific to the program's learning assessment plan vs. the institutional assessment plan.

All courses will contain assessment components. The assessments will be comprised of skills assessments, as well as formative and summative assessments both in the classroom and field setting.

All program courses leading to the degree will require a pass rate of at least 80% mastery. Post-graduation surveys conducted by employers and the college's placement report also help to determine the success of the program's graduates.

All LATC programs use SPOL assessment software to map curriculum and gather assessment data throughout the year. Annually, each department analyzes the assessment data. In addition, under the guidance of our Academics Department, each program creates an assessment and improvement plan annually.

B. Is the program preparation for a professional licensure and/or certification examination?

☐ Yes (Detail in Appendix 4: Section 3)
☒ No

3.3. Describe the program of study by completing Appendix 3.

3.4. Describe the program's work-based learning component.

A. Does the program have a work-based learning component? If so, select all that apply.

☐ None
☐ Apprenticeship
☒ Internship or Externship
☐ Clinical
☐ Capstone
☐ Other:

B. If none, describe why.

3.5. Describe the program's delivery methods.

A. Select the program's primary delivery method(s)[1]. Select all that apply.

☒ On Campus
☐ Online
☐ Blended
☐ Apprenticeship
☐ Other:

B. Describe how flexible delivery methods are being leveraged to increase student access.

Due to the specific hands-on requirements of this degree (utilizing farm and ranch spaces, equipment and land), the primary delivery method for this program will continue to be in-person, on campus. We plan to offer face-to-face instruction with both full-time and part-time student pathways. Production Agriculture practices are highly researched, most often resulting in proven yields and crop outcomes, and much of the preparation takes place in

[1] ***In Person****:* 100 percent of courses are available in-person. ***Online:*** 100 percent of courses are available via distance learning. Delivery is only via the Internet. ***Blended****:* Delivery includes a required combination of both in-person and online courses. If a student has the option to take courses online, but is not required to do so, the program is not necessarily considered blended.

the farm yards and fields. For this reason, the program does not lend itself to an online or blended format at this time. However, after implementing the new curriculum for a few years, LATC will reevaluate to assess if a blended delivery method is feasible.

CRITERION 4: ALIGNMENT

The program is vertically aligned to an education and training pathway.

4.1. The program is vertically aligned to an education and training pathway, reflecting efficient articulation of:
4.1.1. Non-degree credential/industry certification
4.1.2. Certificate to diploma
4.1.3. Diploma to associate of applied science
4.1.4. Associate of applied science to baccalaureate

4.1. Describe the alignment of the proposed program along an education and training pathway.

A. Complete Appendix 4.

B. Describe the projected alignment between the proposed program and existing academic programs within the technical college system.

Under the Agriculture umbrella at LATC, four newly proposed curriculum modifications/realignments will be created to replace the previous Agriculture AAS degree. Production Agriculture, Precision Agriculture Technology, Agriculture Business and Livestock Production and Management will now each exist as independent Associate of Science degrees. The Natural Resources Management degree also falls under the agriculture support system and aligns well with LATC's proposed agriculture programs.

- Production Agriculture AAS shares 31 stackable credentials with the Precision Agriculture Technology AAS.
- Agriculture Business AAS shares 37 stackable credentials with the Production Agriculture AAS.
- Livestock Production and Management AAS shares 30 stackable credentials with the Production Agriculture AAS.
- Natural Resources Management AAS shares 16 stackable credentials with the Production Agriculture AAS.

C. As applicable: Insert any additional comments here.

CRITERION 5: CAPACITY

The institution demonstrates the internal and external resources necessary to develop, implement, and sustain the program.

5.1. The institution demonstrates the financial resources necessary to develop, implement, and sustain the program.
5.2. The institution demonstrates appropriately certified and qualified faculty are in place with expertise in content, pedagogy, and related industry to develop and validate the program learning outcomes.
5.3. The institution's physical facilities (e.g., classrooms, laboratories) reflect current industry and/or occupational standards necessary to develop and validate the program learning outcomes.
5.4. The institution's equipment and technology resources reflect current industry and/or occupational standards necessary to develop and validate the program learning outcomes.
5.5. The institution demonstrates the ability of the program to meet institutional and programmatic accreditation standards, as applicable.

5.1. Describe the institution's financial capacity to develop, implement, and sustain the proposed program.

A. Complete Appendix 5.

B. Describe the proposed program's anticipated local fee structure. Description of fee structure should be specific to the program.

LATC students typically pay a per-semester department fee to assist in covering the costs of contractual services, rent, supplies, and travel associated with operating the academic programs in which they are enrolled. Agriculture students currently pay $629 per semester (Fall & Spring). In addition, courses with specific credentialing or laboratory expenses (ex. Artificial Insemination certification) pay a course fee to directly cover the cost associated with that course. For the purposes of this proposed program change, the current department fee was used as placeholder. When the FY27 program budgets are created in February 2026, Lake Area Tech will determine the appropriate Department and Course fees for each of the new Agriculture programs.

C. What is the proposed program weight factor (funding formula)?

☒ Standard Cost (1)
☐ High Cost (3)
☐ High Cost, Low Density (5)

I. Provide rationale related to the selection of proposed program weight factor.

All Agriculture programs in the technical college system are currently Standard Cost programs.

D. Describe the contingency plans in case anticipated enrollments, income, or resources do not materialize.

Existing classroom spaces at LATC will be used to deliver face-to-face instruction. Labs, shops, bins and farmland spaces will provide state of the art simulations to develop and refine critical thinking and hands-on skills. The agriculture programs have been a hallmark of the LATC student experience for over 50 years, and enrollment in these courses has been historically strong and vibrant. We do not expect this curriculum modification and/or realignment to negatively impact those numbers in any significant manner.

5.2. Describe how the institution will ensure the appropriate certified and qualified faculty are in place with the expertise in content, pedagogy, and the related industry to develop and validate the program learning outcomes.

A. Describe the necessary qualifications of faculty who will be involved in the program.

The instructors within the newly modified Agriculture programs will have earned an AAS degree at the minimum or achieved seven years of industry experience in the specific content areas while working to gain an AAS degree in a related field. As a matter of practice, many of the faculty in the Agriculture department have earned Masters degrees related to the courses they teach and have practiced in industry or conducted research in related areas. The General Education instructors in the updated Agriculture programs will be Masters prepared in each specific content area as the South Dakota Board of Regents and Board of Technical Education college transfer policies outline.

B. Does the instructorship(s) currently exist in the roster of Instructor Salary Support market value determinations?

☒ Yes
☐ No

I. If no: Describe the SOC(s) codes and titles that will need to be added.

5.3. Describe the existing and/or new physical facilities that will be utilized or needed to reflect current industry and/or occupational standards. Outline short- and long-term investments in physical facilities.

The present facilities at LATC will serve this program curriculum modification and realignment well. The educational classrooms, labs and shops within the Agricultural wing of LATC and at the college farms are excellent learning spaces. When needed, program partners provide on-site work spaces.

5.4. Describe the existing and/or new equipment and technology resources that will be utilized or needed to reflect current industry and/or occupational standards. Outline short- and long-term investments in equipment and technology resources.

At present, the Production Agriculture curriculum modification program has updated farm equipment and technology that will be utilized throughout the program's courses. The Production Agriculture Advisory Board has thoroughly reviewed the curriculum and lab requirements, supporting their alignment to industry standards and performance expectations.

5.5. Describe the institution's and proposed program's ability to meet institutional and programmatic accreditation standards, as applicable.

A. Specify Higher Learning Commission (HLC) requirements.

☒ Notification Only
☐ Approval Required
☐ None
☐ Other:

B. Is there an accrediting or professional organization that has established standards for the program?

☐ Yes
☒ No

C. If yes: Describe the ability of the proposed program to meet professional accreditation standards. If the program does not or cannot meet those standards, describe the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation. Provide the date by which the program would be expected to be fully accredited.

   If the institution does not plan to seek specialized accreditation, provide a rationale for not seeking.

No professional accreditation program presently exists for Production Agriculture. If an accreditation process is found in the future, LATC will investigate the standards and make a determination about applying for that accreditation.

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 2.A: Labor Market Information

Lake Area Technical College
Production Agriculture

SOUTH DAKOTA								
SOC* CODE	**SOC* TITLE**	**AVERAGE ANNUAL OPENINGS**	**2023 EMPLOYMENT**	**2033 EMPLOYMENT**	**NUMERIC CHANGE: 2023-2033**	**PERCENT CHANGE: 2023-2033**	**MEDIAN: ANNUAL WAGE (2024)**	**AVERAGE: ANNUAL WAGE (2024)**
00-0000	*Total, All Occupations*	*62,664*	*491,588*	*526,251*	*34,663*	*7.1*	*$ 36,823.00*	*$ 44,961.00*
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals SD DLR	486	3474	3324	-150	-4.32	$ 36,020.00	$ 34,940.00
11-9013	Farmers, Ranchers, and Other Agricultural Managers SD DLR	2,415	21,349	22,751	1,402	6.57	$ 92,960.00	$ 99,990.00
11-9013	Farmers, Ranchers, and Other Agricultural Managers Lightcast		1,536	1,866	330	21	$ 41,885.00	
19-4012	Agriculture Technician Lighcast		487	507	20	4	$ 38,830.00	
19-4012	Agriculture Technician SD DLR	110	723	801	78	10.8	$ 38,240.00	$ 39,160.00
45-2091	Agricultural Equipment Operators SD DLR	238	1,404	1,579	175	12.46	$ 43,220.00	$ 45,300.00
45-1011	First-Line Supervisors of Farming, Fishery, and Forestry Workers SD DLR	68	486	513	27	5.56	$ 57,240.00	$ 60,500.00
45-2091	Agricultural Equipment Operators LightCast	4 per month	521	624	103	19.8	$ 39,379.00	
NATIONAL		**AVERAGE ANNUAL OPENINGS**	**2023 EMPLOYMENT**	**2033 EMPLOYMENT**	**NUMERIC CHANGE: 2023-2033**	**PERCENT CHANGE: 2023-2033**	**MEDIAN: ANNUAL WAGE (2024)**	**AVERAGE: ANNUAL WAGE (2023)**
SOC* CODE	SOC* TITLE							
45-2091	Agricultural Equipment Operators BLS	10,500	62,700	68,000	5,300	8.4	$ 39,690.00	$ 41,850.00
11-9013	Farmers, Ranchers, and Other Agricultural Managers BLS	88,500	856,600	842,900	-13,700	-1.6	$ 87,980.00	$ 90,160.00
19-4012	Agriculture Technician BLS	3,000	19,600	20,800	1,200	5.9	$ 46,790.00	$ 46,810.00
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals BLS	29,400	204,700	194,100	-10,600	-5.2	$ 36,150.00	$ 37,060.00

SOURCE: South Dakota Department of Labor and Regulation, Labor Market Information Center (LMIC) (https://dlr.sd.gov/lmic/)
DATE: 04/22/2025

NOTES:

SOURCE: Lightcast Data
DATE: 04/23/2025

NOTES: Average Annual Openings for 11-9013 and 19-4012 not found. Average Annual Wage not found for each SOC Code above.

SOURCE: Bureau of Labor Statistics https://www.bls.gov/emp/tables/occupational-projections-and-characteristics.htm
DATE: 04/24/2025

NOTES:

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 2.B: Student Demand Projections

Lake Area Technical College
Production Agriculture

	YEAR 1	YEAR 2	YEAR 3
Student Full-Time Equivalent (FTE)	**30**	**34**	**39**
Headcount: Full-Time	35	40	45
Headcount: Part-Time			
Headcount: Total	**35**	**40**	**45**
Total Program or Site Capacity	54	54	54

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 3: Program of Study

Lake Area Technical College
Production Agriculture

MONTHS:	18
SEMESTERS:	4
TOTAL CREDITS:	71

PREFIX AND NUMBER	TITLE	CREDITS	DESCRIPTION	EXISTING COURSE
I. GENERAL EDUCATION CORE				
COMM 101 or ENGL 101 or CMST 101	Communications and Career Strategies, Composition, Foundations of Communication	3	**COMM 101** – This course provides emphasis on the essentials of written and oral communication; also covers effective communication during the job search process. **ENGL 101** – This course concentrates on all phases of the writing/ communication process. Prewriting, drafting, revising and editing are used to help students develop clear, concise and unified writing styles that will serve them well in their chosen career areas.*College transferable. **CMST 101** - The course introduces the study of speech fundamentals and critical thinking through frequent public speaking practice, including setting, purpose, audience, and subject. *College transferable.	Y
MATH 100 or MATH 101 or MATH 114	Applied General Math, Intermediate Algebra, College Algebra	3	**MATH 100** - This course will provide emphasis on the ability to understand and apply math skills to solve problems in the world of work. **MATH 101** - This course will enhance students' problem-solving skills and prepare them for mathematical problems to be faced in future courses and careers. **MATH 114** - This course includes a study of the theory and application of functions, including function notation, graphs, inverses, polynomial, rational, exponential, logarithmic, and other functions. May also include additional topics, such as sequences, series, the binomial theorem, linear systems, matrices, or complex numbers. *College transferable.	Y
PSYC 100 or PSYC 101	Psychology of Human Relations, General Psychology	3	**PSYC 100** - Human relations is a practical course that presents the interpersonal "people skills" that are important in the modern workplace. Topics include communicating effectively, assertive behavior, teamwork, conflict resolution, and work ethics. Students will gain awareness of their individual work styles and how to work effectively with people with different styles in a diverse workplace. Specific techniques for coping with job stress and managing anger will also be emphasized. Class activities and assignments will stress practical application of skills. Course is also applicable in personal settings, such as family, social, and school. **PSYC 101** - This course is an introduction survey to the field of psychology with consideration of the biological bases of behavior, sensory and perceptual processes, learning and memory, human growth and development, social behavior and normal and abnormal behavior. *College transferable.	Y
ECON 105 or ECON 201	Leadership in the Global Workplace, Principles of Microeconomics I	3	**ECON 105** - The study of traditional theories of leadership, as well as the most recently developed leadership philosophies. This course will focus on the application of leadership concepts through critical thinking and the development of critical leadership skills needed in the global workplace. Leadership traits, ethics, changing demographics, workforce diversity, and financial planning are also included. Upon successful completion of this course, the student will be able to relate to the importance of leadership both personal and professional. **ECON 201 -** This course studies the basic economic concepts as they relate to consumer, worker and business decisions. Emphasis is given to satisfaction maximizing behavior by individuals and profit maximization by firms. Market structures are thoroughly analyzed regarding their effect on price, output and competitiveness.	Y
CSC 102 or CSC 105	Windows Application for Technicians	3	**CSC 102 -** Using a Windows-based computer and related software, students will gain a basic operational knowledge of the Windows operating system, Microsoft Office 2021, word processing, spreadsheet, and presentation software. **CSC 105 -** Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about the Windows operating systems, Microsoft Office word processing, spreadsheets, database management, and presentation software. You will demonstrate this knowledge by scoring at least 80% on assignments and related objective and performance tests.	Y
SUBTOTAL OF GENERAL EDUCATION CREDITS:		**15**	**TOTAL NEW COURSES:**	**0**
II. PROGRAM CORE				
AGR XXX	Soils & Fertilizers	2	This course provides students with a foundational understanding of soil properties including structure, texture, tilth, permeability, soil types, organic matter, and soil chemistry. Emphasis is placed on applying techniques to improve soil quality and prevent erosion caused by water and wind. Students will also explore the role of fertilizers, including their sources, components, and functions. By the end of the course, students will be able to formulate custom fertilizer blends and calculate pricing to meet specific agronomic needs.	N
AG 102	Intro to Agronomy	2	This course provides students the understanding of how crops are utilized, production systems and agroecology within the region. The course will also cover difference in seeds and cover the growth stages for major crops grown within this region.	Y
AGR 233	Commodity Marketing I	3	This course introduces students to the global and domestic factors influencing commodity markets, including export trends and technology. Students will explore futures markets, price risk management strategies, and the use of forward contracts, hedging, and options to manage grain marketing decisions. Emphasis is placed on understanding basis, market mechanics, and real-world application through contract analysis and scenario-based learning.	Y
AGR XXX	Ag Accounting	3	This introductory course covers the fundamentals of financial recordkeeping for farm and ranch operations, focusing on accounting principles, financial statements, and the tracking of income and expenses.	N
AGR 156	Farm Financial Management I	3	Farm Management I focuses on core financial principles essential to operating a successful agricultural business. Students learn to build balance sheets, analyze cash flow, understand loans and collateral, and work with ag lenders. A final project challenges students to manage a simulated farm scenario, applying financial tools and marketing decisions in a real-world context.	Y

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 3: Program of Study

Lake Area Technical College
Production Agriculture

AG 124	Ag Chemicals	2	This course is designed to familiarize the student with resources and information required to develop a sound agronomic crop plan. Will prepare students for positions as agronomists who will be making these recommendations to area producers by teaching the need for IPM, basic measurements, SDS and label understanding, annuals, perennials, and biennials and when to target them.	Y
AGR 232	Farm Financial Management II	3	This course focuses on the financial management of farm operations, with in-depth conversations on marginal analysis, cost of production, cash flow planning, insurance, taxes, investment evaluation, and enterprise analysis.	Y
AGR 105	Ag Safety	1	Agriculture is a diverse industry, encompassing all sorts of jobs, opportunities, and potential safety hazards. This class provides students with basic knowledge of vehicle and trailer safety, department of transportation rules and regulations, emergency livestock planning, electrical and grain bin safety, and general fire and emergency response training.	Y
AG XXX	Farm Equipment Maintenance	2	This course focuses on preventative maintenance and minor repairs for commonly used farm machinery and equipment. Students will develop skills in diagnostics, servicing, and routine upkeep to minimize downtime during critical farm operations. Emphasis is placed on safety, tool use, and understanding equipment manuals.	N
AG XXX	Ag Chemical Equipment	2	This course offers an in-depth review of pest management principles, chemical formulations, and proper mixing and application practices in agricultural settings. Students will gain proficiency in calculating chemical quantities, interpreting product labels, selecting appropriate nozzles, and operating sprayers equipped with current technology. The curriculum also addresses critical topics such as personal protective equipment (PPE), water quality considerations, mixing and loading systems, and procedures for preventing contamination through proper sprayer cleanout.	N
AGR XXX	Electronic Components and Troubleshooting	2	This course is designed as a study of the various electronic components that a person may encounter on most precision controlled equipment. It will include identification of various parts and the troubleshooting of the various components.	N
AGR XXX	Agribusiness Law & Compliance	3	This course introduces students to the legal principles and regulations that impact agricultural operations, with a focus on understanding and navigating contracts, property rights, regulatory compliance, and laws related to land use, family matters, and environmental stewardship.	N
AGR 226	Commodity Marketing II	3	This course covers advanced grain marketing strategies. Students will develop both pre- and post-harvest marketing plans and learn to separate basis and futures in decision-making. Practical strategies are emphasized to help students improve profitability and manage risk in a variety of market conditions.	Y
AGR 212	Integrated Pest & Disease Management	3	This course provides the students the understanding of the different types insects and diseases that can affect crop production. This course will cover specific insects and diseases for the major crops grown in the region and different methods of control for crop protection.	Y
AGR 266	Farm Construction & Repair	2	Farm Construction focuses on building and repairing agricultural structures using safe and effective practices. Students will learn basic building principles, how to use power tools, weld, and pour concrete. Hands-on projects give students experience with real-world construction skills needed on the farm.	Y
AGR 241	Crop Harvest & Production	2	Students will gain hands-on experience harvesting crops from the LATC Demonstration Farm while learning best practices in crop production. The course covers harvest timing, crop quality, and safety protocols, with an emphasis on operating and maintaining production equipment.	Y
AGR 169	Production Supervised Occupational Experience I	5	Students will gain real-world experience by completing a supervised internship in an agriculture business setting. This course emphasizes hands-on learning, professional skill development, and application of classroom knowledge as a capstone class. Regular check-ins and evaluations ensure students meet learning objectives and grow in their chosen career path.	Y
AGR 249	Production Supervised Occupational Experience II	5	Students will gain real-world experience by completing a supervised internship in an agriculture business setting. This course emphasizes hands-on learning, professional skill development, and application of classroom knowledge as a capstone class. Regular check-ins and evaluations ensure students meet learning objectives and grow in their chosen career path.	Y
AGR	1st Fall Semester Electives	2	AGR XXX or AGR 121	N
AGR	2nd Fall Semester Electives	4	AGR 120, 215, 262, AGR XXX	N
AGR	2nd Spring Semester Electives	2	AGR 261, 252, 223	N
SUBTOTAL OF PROGRAM CREDITS:		**56**	**TOTAL NEW COURSES:**	**9**

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 4: Alignment Projection

Lake Area Technical College
Production Agriculture

TOTAL CREDITS IN PROPOSED PROGRAM:
71

I. STACKABLE OPPORTUNITIES							
PROGRAM NAME		Short-term Certificate		Existing	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
Precision Agriculture Technology		Long-term Certificate	X	Forthcoming			
		Diploma					
	X	AAS			Fall, 2026	72	31
PROGRAM NAME		Short-term Certificate	X	Existing	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
Natural Resources Management		Long-term Certificate		Forthcoming			
	X	Diploma					
	X	AAS				71	16
PROGRAM NAME		Short-term Certificate		Existing	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
Agriculture Business		Long-term Certificate	X	Forthcoming			
		Diploma					
	X	AAS			Fall, 2026	70	37
PROGRAM NAME		Short-term Certificate		Existing	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
Livestock Production & Management		Long-term Certificate	X	Forthcoming			
		Diploma					
	X	AAS			Fall, 2026	72	30

II. ARTICULATION AGREEMENTS (BACCALAUREATE)						
PROGRAM NAME	**COLLEGE OR UNIVERSITY**	X	Existing	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
Agriculture	South Dakota State Univeristy	X	Forthcoming			
				Fall, 2026	120	TBD
PROGRAM NAME	**COLLEGE OR UNIVERSITY**		Existing	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
			Forthcoming			
PROGRAM NAME	**COLLEGE OR UNIVERSITY**		Existing	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
			Forthcoming			

****Existing articulation agreement with SDSU is being revised to match the updated LATC Ag programs.*

III. LICENSURE AND CERTIFICATION OPPORTUNITIES		
The PROPOSED PROGRAM will qualify students to pursue the following licensure and/or certification opportunities:		
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?

*Numbers will be updated as curriculums are being completed.

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 5: Financial Projections

Lake Area Technical College
AAS in Ag. Business, Livestock Production & Management, Precision Ag. Technology, and Production Ag.**

	YEAR 1	YEAR 2	YEAR 3
	2026-27	2027-28	2028-29
Student FTE	**176**	**194**	**224**

I. PROJECTED EXPENDITURES			
A. ONE-TIME			
New/Renovated Facilities	$ -	$ -	$ -
Equipment	$ -	$ -	$ -
Other	$ -	$ -	$ -
Sub-Total: One-time	$ -	$ -	$ -
B. RECURRING			
B.1. PERSONNEL			
FTE (Faculty and Staff)	9	9	11
Salary & Benefits	**$ 854,239.94**	**$ 875,595.93**	**$ 989,075.83**
B.2. OPERATING			
Rental / Lease	$ 26,250.00	$ 27,562.50	$ 28,940.63
Contractual Services	$ 77,700.00	$ 81,585.00	$ 85,664.25
Equipment	$ -	$ -	$ -
Supplies	$ 52,500.00	$ 55,125.00	$ 57,881.25
Travel	$ 21,000.00	$ 22,050.00	$ 23,152.50
Other	$ 408,663.40	$ 448,533.00	$ 508,337.40
Sub-Total: Operating	$ 586,113.40	$ 634,855.50	$ 703,976.03
Total: Recurring	**$ 1,440,353.34**	**$ 1,510,451.43**	**$ 1,693,051.86**
TOTAL EXPENDITURES (A + B)	**$ 1,440,353.34**	**$ 1,510,451.43**	**$ 1,693,051.86**

II. PROJECTED REVENUE			
Tuition	$ 686,400.00	$ 756,600.00	$ 873,600.00
State Fees	$ 232,320.00	$ 256,080.00	$ 295,680.00
Local Fees	$ 295,815.00	$ 324,675.00	$ 367,965.00
Location-Based Fees	$ -	$ -	$ -
State Sources	$ 1,052,952.66	$ 114,928.25	$ 1,223,701.74
Federal Sources	$ -	$ -	$ -
Private Grants or Gifts	$ -	$ -	$ -
Other	$ 193,827.50	$ 212,737.50	$ 241,102.50
TOTAL REVENUE	**$ 2,461,315.16**	**$ 1,665,020.75**	**$ 3,002,049.24**
REVENUE - EXPENDITURES	**$ 1,020,961.82**	**$ 154,569.32**	**$ 1,308,997.38**

**Projections are held constant based on current fiscal year. Inflation or rate changes are not factored.*

Notes:

*****Board staff has approved LATC's submission of one consolidated budget for Ag. Business, Livestock Production & Management, Precision Ag. Technology, and Production Ag. due to the nature of the proposed changes.***

South Dakota Board of Technical Education
800 Governor's Drive
Pierre, SD 57501

Dear Committee,

My name is Tim Toennies and I am a self- employed farmer/ rancher. I am also a former student of the program. I'm writing to express my strong support for the continued growth and investment in the Ag Production program at Lake Area Technical College. As someone actively involved in agriculture, I see firsthand the need for skilled, knowledgeable individuals who can step into production roles with confidence, people who understand not just how to operate equipment or care for livestock, but how to make smart, sustainable, and profitable decisions for the future of their farms or employers.

The demands on today's producers are higher than ever. From managing tight margins and volatile markets to staying ahead of environmental regulations and adopting new technology, production agriculture requires a wide range of practical and business-oriented skills. Expanding the Ag Production program to offer more hands-on training in areas like equipment operation and maintenance, crop management, soil health, and animal husbandry is critical to ensuring our next generation of producers is up to the task.

I've seen how difficult it can be to find employees who are both capable in the field and confident in their decision-making. Lake Area Tech plays a crucial role in filling that gap by producing work-ready graduates who can contribute from day one.

I fully support this initiative and believe it's essential to keeping agriculture strong in our state. Thank you for your time and your commitment to technical education.

Sincerely,
Tim Toennies
Owner
Toennies Cattle Company

South Dakota Board of Technical Education
800 Governor's Drive
Pierre, SD 57501

Dear Committee,

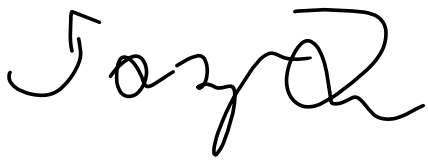
My name is Tony Lyren and I am the Market Development Agronomist for Winfield United in South Dakota. I'm writing to express my strong support for the continued growth and investment in the Ag Production program at Lake Area Technical College. The current labor situation in agriculture has created demand for skilled workers in a range of disciplines. The Ag Production program at Lake Area is especially effective at teaching multiple facets of our agricultural industry and setting students up with knowledge and confidence as they step into employment or become producers themselves.

The current agricultural environment rewards those who can be adaptable and master a wide variety of skills. From volatile markets to environmental regulations, the challenges our next generation of producers will face are transformational and complicated. This generation will see rapid change in ag technology, government regulations, understanding of agronomic principles and practices. Expanding the Ag Production program to offer more hands-on training in areas like equipment operation and maintenance, crop management, soil health, and animal husbandry is critical to ensuring the success of the future of production agriculture.

It can often be difficult to find employees or producers that are the trifecta of confident, knowledgeable, and capable in the field. Lake Area Tech plays a crucial role in filling that gap by producing work-ready graduates who can contribute from day one.

I fully support this initiative and believe it's essential to keeping agriculture strong in our state. Thank you for your time and your commitment to technical education.

Sincerely,



Tony Lyren
Market Development Agronomist
Winfield United

South Dakota Board of Technical Education
800 Governor's Drive
Pierre, SD 57501

Dear Committee,

My name is Brady Fuhrman, and I am employed with Alchemy Wealth Partners. I'm writing to express my strong support for the continued growth and investment in the Ag Production program at Lake Area Technical College. As someone actively involved in agriculture, I see firsthand the need for skilled, knowledgeable individuals who can step into production roles with confidence, people who understand not just how to operate equipment or care for livestock, but how to make smart, sustainable, and profitable decisions for the future of their farms or employers.

The demands on today's producers are higher than ever. From managing tight margins and volatile markets to staying ahead of environmental regulations and adopting new technology, production agriculture requires a wide range of practical and business-oriented skills. Expanding the Ag Production program to offer more hands-on training in areas like equipment operation and maintenance, crop management, soil health, and animal husbandry is critical to ensuring our next generation of producers is up to the task.

I've seen how difficult it can be to find employees who are both capable in the field and confident in their decision-making. Lake Area Tech plays a crucial role in filling that gap by producing work-ready graduates who can contribute from day one.

I fully support this initiative and believe it's essential to keeping agriculture strong in our state. Thank you for your time and your commitment to technical education.

Sincerely,
Brady Fuhrman, CFP®
Financial Advisor
Alchemy Wealth Partners – Ameriprise Financial