NORTHERN NEW MEXICO COLLEGE

NORTHERN NEW MEXICO COLLEGE
BOARD OF REGENTS

NOVEMBER 21, 2024

NORTHERN New Mexico College

NOTICE

The Board of Regents of Northern New Mexico College will hold a regular meeting on **Thursday, November 21, 2024** at **10:00AM,** Via Zoom and in person at Northern New Mexico College, Board Room, Española Campus, Española, New Mexico. Prior to the meeting the Board of Regents will have coffee with students and a tour of NNMC Española Campus.

Join Zoom Meeting
https://nnmc.zoom.us/j/93884181987

FINAL AGENDA

I. CALL TO ORDER
II. APPROVAL OF AGENDA
III. PUBLIC INPUT
IV. COMMENTS FROM THE BOARD
- A. Board of Regents Subcommittee Reports
  1. Housing Committee – Informational
  2. Audit, Finance, Facilities Committee – Informational
  3. Academic and Student Affairs Committee – Informational
  4. Governance Committee
  5. HERC Committee - Informational

V. APPROVAL OF MINUTES
VI. PRESIDENT'S REPORT AND ANNOUNCEMENTS
- A. Celebrate Northern – Informational
- B. CUP/NMICC Report – Informational
- C. NNMC Foundation – Informational
- D. Introduction of Staff and Faculty – Informational
- E. Northern New Mexico College Branch Community College Board Meeting - Informational

VII. ADVISORY REPORTS
- A. Faculty Senate President Report
- B. Student Senate President Report

VIII. STAFF REPORTS
- A. Provost & Vice President for Academic Affairs
  1. Certificate in Technical Trades (HVAC) – Action Required
  2. Certificate in Technical Trades (Welding) – Action Required

3. Program Elimination Exemption (Post Baccalaureate Certificate in Information Technology) - Action

IX. DEEP DIVE

A. Campus Law Enforcement Info

X. EXECUTIVE SESSION

(1) Limited personnel matters related to the hiring, promotion, demotion, dismissal, assignment, resignation, or investigation or consideration of complaints or charges against an employee;
   a. No items

(2) Bargaining strategy preliminary to collective bargaining
   a. No items

(3) Threatened or pending litigation subject to the attorney-client privilege in which the College may be a participant; and
   a. No items

(4) Real estate acquisition or disposal.
   a. No items

XI. VOTE TO REOPEN MEETING - Certification that only those matters described in the Executive Session Agenda were discussed in the closed session; if necessary, final action with regard to certain matters will be taken in Open Session

XII. ADJOURNMENT

In accordance with the Americans with Disabilities Act (ADA), physically challenged individuals who require special accommodations should contact the President's Office at 505-747-2140 at least one week prior to the meeting or as soon as possible.

921 Paseo de Oñate | Española, NM 87532 | Ph: 505 747.2100 | Fax: 505 747.2180
P.O. Box 160 | El Rito, NM 87530 | Ph: 575 581.4100 | Fax: 575 581.4140 | *www.nnmc.edu*

DRAFT 11.12.24

NMICC
NEW MEXICO INDEPENDENT COMMUNITY COLLEGES

NEW MEXICO ASSOCIATION of COMMUNITY COLLEGES

Supported by the Higher Education Regents Coalition

New Mexico Higher Education 2025 Legislative Session Unified Request

Recurring Requests

Formula funding a 5.0% increase in formula funding, $42.1 million

Minimum 4.0% Compensation increase for all employees, allowing institution flexibility to implement an 'average' increase, $xx.x million

Non Formula Adjustment - Student Services/Basic Needs $4.0 million spread across all institutions including the NM Military Institute

Non Formula Adjustment - Supplemental Faculty Compensation $8.0 million spread across all institutions including the NM Military Institute

NCHEMS Study

The associations request:

- Institutions be held harmless
- the study include a small school component,
- the study encourage collaboration not competition between institutions.

New Mexico Funding Formula Fast Facts

Each 1.0% of formula funding generates approximately $8.4 million

Each 1.0% tuition increase generates approximately $4.1 million

Each 1.0% of formula funding is equivalent to a 2.9% tuition increase

Non-Recurring Requests

Dual Credit $10.0 million (HED requested amount) to support programs over 3 - 5 years

Technology Enhancement Fund (TEF) $50 million for expenditure through FY 2027.

Campus Safety $10.0 million for campus safety equipment including access controls

Higher Education Faculty Endowment $10 million

Building Renewal & Replacement up to $100 million, a minimum of $30.0 million (HED recommendation) to support critical infrastructure improvements and building demolition

Equipment Renewal & Replacement up to $10 million, a minimum of $5.0 million (HED recommendation) for institution equipment

Expanded Cybersecurity $11.7 million, working in conjunction with HED and DoIT, to assist in protecting institutions from cyber threats. (HED is requesting $10.0 million.)

Language Requests

- Appropriations made for the Technology Enhancement Fund are to be made to the TEF non-reverting fund. The performance period should be at least two fiscal years.
- The $20M appropriation from NM GRO for FY2025 for workforce training, internships and externships be reauthorized for expenditure in FY2026.

New Mexico's higher education institutions respectfully request funding be appropriated to institutions for increased institutional costs due to changes in state statute that impact employee benefits, such as increasing the mandated employer share of insurance benefits, or the implementation of paid leave programs.

STUDENT CENTERED FUNDING
TRANSFORMING AND GROWING NEW MEXICO'S ECONOMY

HIGHER EDUCATION UNIFIED PRIORITIES for 2025 LEGISLATIVE SESSION

Supported by the Higher Education Regents Coalition (HERC)

FUNDING FACTS

- *Each 1.0% of formula funding generates approximately $8.4 million*
- *Each 1.0% tuition increase generates approximately $4.1 million*
- *Each 1.0% of formula funding is equivalent to a 2.9% tuition increase*

RECURRING FUNDING PRIORITIES

As the NCHEMS higher education funding study has not been completed, the associations recognize the outcome of the study may impact the level of funding the LFC, DFA & HED will consider as the funding recommendations for FY2026 – FY2030 are developed.

The associations request: institutions be held harmless in the outcomes of the study, the study include a small school component, the study encourages collaboration between institutions.

Instruction & General (I&G) Funding Increase: $42.1 million – 5.0% increase in I&G Funding for core higher education operations -- including instruction and student support -- has a significant impact on student outcomes. This funding increase, based upon the HEPI forecast of 3.4% and the projected increase in health and risk insurances, will allow institutions to direct funding as needed while supporting students and our employees.

Compensation minimum of 4% increase for all employees: $XXX million

- Provide compensation equivalent to the increase provided for state agency and public education employees, no less than the national COLA.
- Increase compensation percentage funded by the state in general fund appropriation [to 100%]. In FY [XXX] the legislature supported [XX]% of the compensation increase, the remaining {xx]% was left to institutions to fund, required that institutions to increase tuition and/or reduce expenses.
- Affirm flexibility for institutions to implement an "average" increase to address pay inequities, including addressing compensation for our lowest paid staff.

Non Formula Adjustment -- Student Support Funding to increase student retention & graduation $4 million
Including:

- Tutoring and academic advising
- Student basic needs services, also referred to as wrap around services.
- Behavioral and mental health

Non Formula Adjustment – Supplemental Faculty Compensation Increases $8 million Continue increased compensation support for targeted faculty to retain and attract full and part-time/adjunct faculty, researchers.

Employee Benefit Enhancements

- Fully fund any statutorily enhanced employee benefits, including any required increase in employer share of group insurance.

Graduate Student Support $xx million

- Details are being developed.

NON-RECURRING FUNDING PRIORITIES

Dual Credit: $10.0 million
Support the HED request for $10 million for dual credit. Funding dual credit at New Mexico's higher education institutions is a good investment for the state, providing courses for high school students to complete college credit courses.

Technology Enhancement Fund (TEF): $50 million through FY2027
Continued funding for the Technology Enhancement Fund with the goal of building proof-of-concept to further substantiate longer-term, sustainable funding for this pilot project in the future.

To avoid year-end reversions of TEF dollars committed to federal grant opportunities whose application process spans two state fiscal years, this request recommends a performance period for this appropriation of at least two FYs.

TEF appropriations should credited to the TEF, a non-reverting statutory fund, rather than being appropriated directly to HED where monies are subject to reversion.

TEF research partners and HED will propose policy changes that seek to simplify TEF-related statutes and agency rules while reducing administrative burdens and maximizing ROI for legislative and executive stakeholders.

Campus Safety: $10.0 million
Provide support for campus safety equipment including vehicles, patrol bicycles, patrol golf carts, access control, cameras, and other safety equipment. This funding is for at all public higher education institutions, including New Mexico Military Institute and New Mexico's Native American institutions.

Supported Statewide Initiatives

Building Renewal & Replacement: up to $100 million, minimum $30 million [HED request]

- Support non-recurring funding for critical infrastructure.
- Support to address critical deferred maintenance needs.
    - (Use the original BR&R formula, excluding square footage added in last 5 years.)
- Support funding for building demolition for health and safety.
- Support funding for construction cost overruns due to inflation and supply chain challenges.

Equipment Renewal & Replacement: up to $10 million, minimum $5 million [HED request]
Support non-recurring funding for institutional instruction and general equipment.

Expanded Cybersecurity Initiatives $11.7 million
Working in conjunction with HED and DoIT, to assist in protecting institutions from cyber threats.

Language, Substantive Legislation

Regional Universities & Community Colleges –
Request the $20M appropriation for workforce training, internships, and apprenticeships at community colleges and regional universities from NM GRO not revert but be reauthorized for expenditure in FY2026.

In the future, after data has been collected on the uses and outcomes of the : (Collect data over the 3 years for the uses and outcomes of the $60M). By the 2027 Legislative Session either create a workforce training fund and have appropriations made to the fund or have a predictable methodology for annual appropriations to institutions for workforce training, internships, externships, and apprenticeships.

- Service-Learning Funding (Paid Internships for Credit)
- Undergraduate Research Program/Workforce Training
- Short-term, industry recognized workforce training

Financial Aid

Lottery & Opportunity Scholarships:

- Support continued funding of the Lottery and Opportunity Scholarships, recognizing the relationship between state appropriations for higher education institutions and the established tuition and fees are linked.
- Support review of the programs and their sustainability.
- Continue to recognize the needs of students in allowing exemptions for at-risk students and hardships.

C.U.P. MEETING NOTES

HIGHER EDUCATION I&G/RPSP STUDY UPDATE
November 1, 2024

Information from HED Presentation at CUP Retreat:

- Background: Higher Ed Funding in NM
  - **Enrollment and Funding:** Prior to 2013, enrollment could cause increases/decreases in funding, with enrollment changes exceeding 3% (up or down) reflected in HEIs' budget appropriations.
  - **Move to Base-Plus Funding:** The 2013 formula change turned out to be good timing because enrollment started to decline about then. However there was no high-level study done at that time to determine whether Base-Plus funding was adequate.
- Background: RPSP/I&G Funding Study

  In 2023, $200k was appropriated to HED for a study re: I&G Base, Research & Public Service Projects, and recommendations on a sustainable funding model for higher education in NM.
  - The National Center for Higher Education Management Systems (NCHEMS) is doing the study.
  - In 2024, HED changed the RPSP process & rolled up numerous RPSPs into institutions' bases.
  - HED staff agree that the Base-Plus funding model may not allow for sufficient base funding.
- NCHEMS: Guiding Principles
  - Public postsecondary institutions are public assets.
  - Funding streams are deeply interconnected and affect each other.
  - Costs are shared between the state, institutions and students.
  - States and systems should proactively identify and address structural inequities (among institutions) baked into base funding
  - Any performance metrics incorporated into the funding model should promote collective progress toward state goals.
- NCHEMS: Approach to State Funding
  - **Funding model** addresses fixed costs, variable costs, and incentive funding.
  - **Cost Model** addresses fixed and variable costs.
    - Fixed Costs including "frugal" foundational funding (with low administrative funding), preventative maintenance, and personnel – *funded by the State*
    - Variable Costs including SCH weighted by level and discipline (Scale & Scope), and SCH weighted by student characteristics or added weights applied to headcount (Audience) – *funded by a mix of State and tuition dollars*
  - **Incentive Funding** is tied to State goals and to 6-year plans and includes:
    - Performance / Incentives recognizing activities related to the strategic plan, closing equity gaps and economic development – *funded by State and tuition dollars*
    - Capacity Building, e.g., funding needed to start new programs or fund initiatives prioritized by the legislature, Governor or the 6-year plan process – *funded by a mix of State, external funders and tuition dollars*
    - Purchase of Goods and Services for specific purposes, i.e., research purposes, incentives to seed and support shared academic program delivery, noncredit offerings, etc. – *funded by State dollars and external funders*
  - **Externally Funded Research & Public Service** including grant management, community engagement, museums, arts, and extension services – *funded by external funders*
  - **Other Programs** including Advancement, Auxiliaries, Athletics, etc. – *funded by the institution*

C.U.P. MEETING NOTES

Discussion with HED re: NCHEMS Study

- Specific Funding Issues
  - **Peer Institutions**
    - The relationship between courses and funding ($ value of each SCH) allows us to look at other states' funding costs. This calculation is deep in our funding formula.
    - NCHEMS study will have peer comparisons of NM HEIs to other states' HEIs in terms of how they're funded, but not comparisons of one NM HEI against another.
    - HED hopes to get new peer groups from NCHEMS study. The old ones were selected based on faculty costs, but ignored student body makeup and Pell-eligible percentage.
    - HED hopes to benchmark NM schools to institutions with more similarities.
  - **Dual Credit**
    - Original thought was Dual Credit SCH came from empty seats in existing classes, but now DC enrollment has doubled and appropriations are not covering costs. (Chisolm)
    - Mark Chisolm will ask NCHEMS to include Dual Credit in the study.
  - **Status of Degree and Enrollment Data**
    - HED just finalized degree and enrollment data for the last year.
    - HED is now in the process of doing a major "data dump" to NCHEMS for this study.
- HED Formula Technical Committee (FTC)
  - **Committee Membership:** FTC membership includes representation from CUP, NMICC and NMACC. Marc Saavedra is the CUP representative.
  - **Meetings:** Most committee meetings are open to the public, although the public cannot provide comment or vote. Meetings are closed when policy decisions are made.
  - **NCHEMS Final Report Discussion:** The committee will meet in public when the NCHEMS report arrives. The Secretary will lead the discussion; Higher Ed leaders will be involved. HED wants to ensure the study is sound and leads Higher Ed in the right direction.
- NCHEMS Report Status
  - **HED** had received a draft report from NCHEMS (prior to the August 26 CUP Retreat), but had not had a chance to thoroughly review the draft and complete commenting on it.
  - **NCHEMS** is currently working on data collection on expenditures and revenue sources, and completing peer analysis.
  - **Data and Definitions:** NCHEMS is using IPEDS data and definitions
  - **First draft of institutional peers** to benchmark administrative costs per FTE has been developed. Peer lists were distributed to FTC and all HEIs for review/comment by Sept. 5.
    - **Regional Peers**: HED is trying to get away from peer comparisons with Arizona, Texas, Colorado, etc., and select peers more similar to NM HEIs than those in neighboring states.
    - **Revisions**: Peer lists were being revised and HED was still in discussion with NCHEMS on them on 8/26/24.
    - **In-State Peers**: Gerald said he would have other NM institutions removed from each institutions' peer group, then get the revised peer group lists out to the institutions.
    - **Peer Funding**: CUP institutions are interested in seeing how their peers are being funded and whether they have performance funding or other resources.
  - **Criteria used to select new institutional peers**
    - Institutional characteristics
    - Total FTE Students
    - Total Headcount

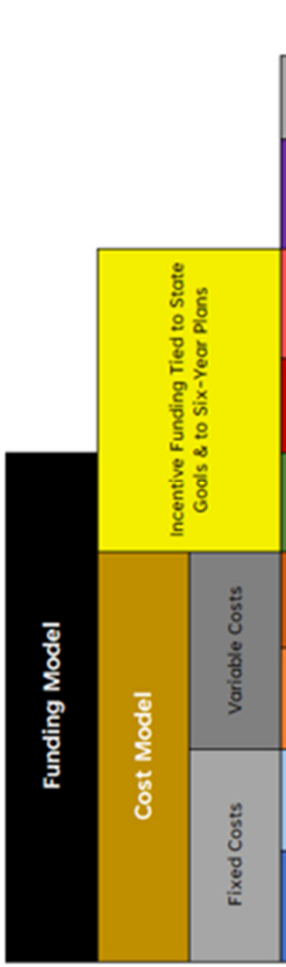
        - Mix of credentials awarded, by level and by field
        - Research expenditures
        - Endowment per FTE Students
        - Percent of undergraduates with Pell
        - Percent of students enrolled via distance education
    - **Criteria NOT used to select peers:** Graduation rates, persistence rates, postgraduation outcomes, acceptance rates, alumni giving rates, tuition revenue, expenditures per student
- Project Timeline:
    - **HED's Project Timeline (April 2024 – June 2025)**
        - Draft report is due by early January 2025
        - Feedback submission period follows receipt of draft report
        - Final report is due in June 2025

Related Discussions re: Higher Ed Funding

- Institutional Funding and Local Support: Institutions can expect some interesting discussions in November and December regarding how local support fits in (i.e., mill levies / property taxes).
- Comments by LFC Chair George Munoz re: Funding Formula / I&G Study (at CUP Retreat)
    - The I&G Study is very important. It will give us a true picture of Higher Ed funding needs.
    - We don't know where the NCHEMS study will come down on I&G.
    - **Getting the (NCHEMS) study in December will lead to mistakes at the end of March.**
    - Don't want to water down the formula so UNM gets everything and WNMU gets nothing.
    - We have to stick together and work this out.

# # #

NCHEMS APPROACH TO STATE FUNDING



Category	Function and Roles	Funding Responsibility
Other	Advancement, auxilaries, athletics, etc.	Institution
Externally Funded Research and Public Service	Grants management, community engagement, museums, arts, extension services	External Funders
Purchase of Goods and Services	Funding for specific purposes, e.g., research on tobacco usage in Southwest Virginia, incentives to seed and support shared academic program delivery, noncredit offerings	Mix (State & External Funders)
Capacity Building	Funding needed to start new programs or fund initiatives prioritized by the General Assembly, the Governor's office, or through the 6-year plan process	Mix (State, External Funders, & Tuition)
Performance / Incentives	Factors in the model that recognize: activities related to strategic plan, closing equity gaps, economic development	Mix (State & Tuition)
Audience	Semester credit hours (SCH) weighted by student characteristic(s) or added weights applied to headcount	Mix (State & Tuition)
Scale & Scope	Semester credit hours (SCH) weighted by level and discipline	Mix (State & Tuition)
Preventative maintenance as applied to facilities, technology, and personnel	Shares of facilities replacement value of facilities, technology value, payroll (for professional development)	State
"Frugal" foundational funding	Benchmarked against similar institutions with relatively low spending on administrative expenses	State

PROJECT TIMELINE

APRIL 2024 – JUNE 2025

Project Launch
May - June 2024

- Project Initiation Visit.
- Meet with Technical Review Committee.
- Review current funding model in NM.
- Data Request.

Adequacy Model
June - October 2024

- Draft adequacy model concept for New Mexico context.
- Populate and contextualize adequacy/equity funding model draft.
- Meet with Technical Review Committee to discuss and review adequacy funding model, including making adjustments.

Peer Analysis and RPSP Survey
June - October 2024

- Complete peer analysis, including identifying institutions and outcome variable analysis.
- Draft, review, and field RPSP survey.
- Analyze RPSP survey results and complete dataset.

Final Report
October - January 2025

- Provide draft report of adequacy model as a priority.
- Complete outline of report and draft for feedback.
- Visit NM to present draft report and engage feedback.
- Submit final report.

Office of the President
NORTHERN New Mexico College

MEMORANDUM

To: Board of Regents,
Northern New Mexico College

From: Hector Balderas, JD, CFE
President

Date: November 21, 2024

Re: Board of Regents Meeting Minutes

Issue

Northern New Mexico College (NNMC) provides, on a monthly basis, Board of Regents Minutes from the previous month for approval.

Recommendation

Staff recommends that the Board of Regents approve the attached Board of Regents Minutes for October 24, 2024 as submitted or if applicable, as amended.

Office of the President
NORTHERN New Mexico College

BOARD OF REGENTS MINUTES
OCTOBER 24, 2024

A Regular Meeting of the Board of Regents of northern New Mexico College was held on Thursday, October 24, 2024, In Person and Via Zoom in Cutting Hall, Northern New Mexico College, El Rito Campus. Regents Present in person and Viz Zoom: Michael A. Martin, Porter Swentzell, Casandra Batista Dauz, Ruben Archuleta. Erica Velarde was not present.

Northern New Mexico College Staff Present: President Hector Balderas, JD, CFE, Larry Guerrero, EdD, Interim Provost & Vice President for Academic Affairs, Theresa Storey, Chief Financial Officer/Compliance Officer, Matthew Baca, General Counsel, Scott Stokes, Chief Information Officer, Sally Martinez, Executive Assistant to the Provost & Vice President for Academic Affairs, Sandy Krolick, Creative Director, Communications & Marketing, Arin McKenna, Staff Writer/Reporter, Joshua Lopez, Dual Credit, Sara McCormick, Career Services Specialist, Sondra Adams, Financial Aid Director, Juan Gallegos, Windows Systems/Information Security Administrator, Judith Pepper, Major Gifts Officer, Martin Shupla, Director of Library, Carmella Sanchez, Director of Institutional Research, Vince Lithgow, Accountant III, Deborah Trujillo, IT Manager/Web Administrator, Tammy Winston, Student Life, Maria Cedillo, Senior Project Manager/Database Administrator, Farjahan Shawon, Director, Center for Teaching and Learning, Alonzo Lopez, Administrative Assistant, Kristy Alton, Director, Title V, Higinia Padilla, Admin Coordinator, Title V and Title III, Julianna Barbee, Director, SBDC, Patrice Trujillo, Health and Safety Manager, and Amy Peña, Executive Office Director.

Faculty Present: Scott Braley, Faculty Senate President,

Others Present: Jasie Green, Student Senate President, Nicholas Atencio, Tim Crone,

I. CALL TO ORDER

Board President Martin called the meeting to order at 9:02AM.

II. APPROVAL OF AGENDA

Regent Swentzell moved to approve the agenda as presented. Second – Regent Batista Dauz. A roll call was taken. Board President Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes. Motion passed unanimously.

III. PUBLIC INPUT

None.

IV. COMMENTS FROM THE BOARD

A. Board of Regents Subcommittee Reports

1. Housing Committee

Regent Archuleta stated they did not meet this past month other than the (inaudible).

2. Audit, Finance, Facilities Committee

Regent Archuleta stated it was a quick meeting and nothing to share at this time.

3. Academic and Student Affairs Committee

Regent Swentzell stated there was a meeting yesterday and the main item was the faculty handbook which is an action item later in the meeting. It was a short meeting with the content to be discussed.

4. Governance Committee

Board President Martin asked Regent Swentzell if he had any comments. Regent Swentzell stated it looks like a nice merge of various policies put together and kind of updating it to present day needs, and also you know how the board is sort of actually de facto with operating. It is a good update. Board President Martin stated he would like to thank Mr. Baca and asked him for an update.

Mr. Baca stated at the last meeting, the Governance Committee put together some proposed changes to the policies and procedures document of the Board. The Board had the opportunity to review those and discuss them at the last meeting. The Governance committee through Mr. Baca, effectively completed those changes since the last meeting, and puts the document before the full board for approval today. As they discussed at the last meeting, the highlights of the changes, substantive changes are updating the college's mission, vision, value statements, strategic pillars, core values, those types of things. The probably largest addition to it was the inclusion of a conflict-of-interest policy as we discussed. That really matches the Board's obligation under the State's financial disclosure policies and indicating the Board will maintain a conflict free operation and then, as Regent Swentzell just mentioned, a lot of it was updating the language

to formalize what the current practices of the Board are in terms of the conduct of meetings in terms of the groups that you're hearing from in terms of things like approving the Faculty Senate Charter, approving the Student Senate Charter and then there was a variety of other non-substantive sort of changes and thinks like that. As Regent Swentzell noted, there is one procedural thing that Mr. Baca thinks we should call out in the motion to approve. The Board has published both a document that is title Bylaws, and then a document that is titled Policies and Procedures. The Bylaws document is in the board packet, as the Board saw. Really, it contains effectively, almost the same information so Mr. Baca thinks the recommendation is, rather than continuing to maintain both of those documents, and continuing to update two different documents with the same information, would be to merge them and to come out with this document. That's the proposed passage for today. That is just a single document that is both the Bylaws and Policies and Procedures. With that Mr. Baca stood for questions.

No questions from Regent Archuleta. No questions from Regent Batista Dauz. Regent Swentzell had no questions but stated he would like to thank Mr. Baca for working on this and putting it together. He appreciates it and it's probably long overdue.

Board President Martin stated historically the leadership of the Board is referred to as the chairman and that was how it was in our Bylaws and somehow, we got into following the President. So, this will reverse back to having a chair of the Board. Board President Martin asked if this is correct. Mr. Baca stated this was discussed at the last meeting. Yes, it will be Chairperson; ultimately there is not a substantive difference between it, it is sort of the will of the Regents as to how you would like to refer to yourself. It is difficult to imagine a situation where, whether we refer to you as President Martin or Chairperson, or Vice Chair or Vice President, that that would make a material difference in any sort of formal action. But yes, to answer Board President Martin's question. Board President Martin stated historically, he believes since the beginning of the school, the leadership is referred to as Chair and asked Mr. Baca if this is right. Mr. Baca stated yes, he thinks that is so. Board President Martin stated, all right, if there are no more questions, he will entertain a motion to approve the document.

Regent Swentzell moved to approve the updated bylaws and policies and procedures of the Board and to supplant any former policies. Regent Batista - second. A roll call vote was taken. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

5. HERC

Board President Martin stated HERC had their annual meeting on Tuesday. They

are still looking for an Executive Officer to lead HERC. They published a job description and we had no applicants so there was much discussion that instead of an Executive Director, they needed more of an administrative assist given their constraints on budget. So, they are going to rework that and get back to us and see if they can find somebody to help with the leadership of the HERC. We were scheduled to have elections but as everyone knows, a lot of Regents terms are expiring at the end of the year. So, they thought they would wait until the new Regents are appointed and then they would reestablish the leadership of the program. Board President Martin asked if there were any questions of the Board. No questions from the Board

6. November/December Board Meeting.

Board President Martin stated they will now discuss the November/December Board Meeting. Thanks to Ms. Pena, she polled the Board and it looks like November 21, 2024 would work for the Board and the President. Ms. Peña responded yes. Board President Martin asked Mr. Baca if we need a motion for this. Mr. Baca stated he thinks it would be okay since the Board has set the calendar for the year previously, it is not going to hurt at a minimum to just say, combine November/December meeting.

Board President Martin entertained a motion to have the November/December on November 21st in Española.

Regent Swentzell moved to have the November/December Board Meeting on November 21, 2024 in Española. Second – Regent Archuleta. A roll call vote was taken. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

V. APPROVAL OF MINUTES

Board President Martin entertained a motion to approve the minutes of September 27, 2024

Regent Batista Dauz moved to approve the minutes of September 27, 2024. Second - Regent Archuleta. A roll call vote was taken. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

V. PRESIDENT'S REPORT AND ANNOUNCEMENTS

A. Celebrate Northern

Northern has received a $2,847,151 five-year Developing Hispanic-Serving Institutions grant from the U.S. Department of Education. The grant will fund Northern's Title V "Proyecto Apoyo," which will create and staff a new Student Success Center, El Epicentro, where students will receive academic support, mentoring, advising, identity-affirming activities and professional career exploration to deepen their sense of connection and success in their chosen pathways. The goal is to increase Hispanic and low-income student enrollment, retention, persistence and post-college outcomes. I want to thank Kristy Alton and Nick Eckert and Dr. Guerrero for their hard work on writing this grant, and for the great work administering these grants. We have received 4 Title V grants and 1 Title III grant from Developing Hispanic-Serving Institutions since 2018, and that only happens if you are successfully administering those grants. Dr. Lopez and others have had their hand in this successful legacy.

President Balderas stated he was the keynote speaker at the Disability Employment Awareness Month Conference last week. More than 250 people joined to hear about what is happening in the state and what more can be done to support New Mexicans with disabilities in finding and maintaining meaningful employment. This was not only personal to President Balderas because of his own advocacy with his daughter but he believes Northern is emerging as a disability leader. We are having good conversations about how to access or expand accessibility here in our resource center. Thank you to Brenda Janot for attending on behalf of NNMC. President Balderas aggressively promoted Northern and dedication to disabilities.

President Balderas hosted a luncheon to thank the team behind the successful launch of our new website and online catalog. I again want to thank Sandy Krolick for leading the project and Milam Shah, Arin McKenna, Deborah Trujillo, Scott Stokes, Juan Gallegos, Janice Baca, Kristy Alton, Janett Orozco, Lisa Pelletier and Northern Alum Jafett Garcia for their hard work on every aspect of this tremendous project, that involved intensive work over the course of two years to complete. President Balderas stated we might have caused a little stress because he put a deadline on the team and they really did come together in the last thirty days and went live. The website will take continual work and President Balderas wanted to let the Board know. It was worth recognizing them once again and thanking them.

President Balderas congratulated the Department of Biology, Chemistry and Environmental Sciences Chair Sushmita Nandy on being awarded "Mentor of the Year (2024-25)" by the New Mexico Alliance for Minority Participation. She richly deserves this recognition of her ongoing commitment to supporting and guiding our students through their academic journey in a STEM field. This award also highlights Northern's

commitment to fostering student success and well-being.

Our students are receiving some outstanding recognition in the form of scholarships. congratulate Tamara Foster, who was just awarded the Lonnie Lee and Maria Elena Abernethy Scholarship for Native Americans from the Society of Women Engineers. Nine of the 11 Mana del Norte Scholarships recipients this year were Northern students and alumni. Join me in congratulating Carla Gasca, Jade Madrid, Judith Maldonado, Claudia Mendez Muniz, Monique Salazar, Nataly Sanchez Flores and alumni Lindsay Angulo-Lopez, Caitlin Scott, and Arieal Tapia. Nine of the eleven scholarships went to alumni and Northern students. Congratulations to everyone.

President Balderas thanked Patricia Sutliff for offering voter registration at the Writing Center and Wendy Dolci, who provided voter registration at Student Life events arranged by Tammy Winston. I want to encourage everyone to get out and vote and urge you to support GO Bond 3, which will provide $5 million in funding to address critical deferred maintenance needs on our Española campus. Early voting ends November 2 and Election Day is November 5.

President Balderas thanked Khiana Seaboy and Adam Baca for organizing an event in honor of National Recovery Month for Northern's Counseling and Student Support Center, and to acknowledge the brave individuals, including Española City Councilor Sam Ledoux, who shared their personal stories with a message of hope that "Recovery is possible, even when it feels hopeless." I want to remind all our students that we have a team that cares deeply about your development and success, who are there to support you when you are in need.

Northern had a successful Faculty and Academic Staff Professional Development Day. The day included sessions on pedagogical listening, AI as a learning tool and a tour of our new online catalogue. Thanks to Dr. Larry Guerrero for providing that great training to our faculty and staff and to Kristy Alton (Title V) and Lynn Chamberlain (Title III) for providing lunch. There was a lot of comradery and professional development that day.

President Balderas thanked staff for assisting in hosting the New Mexico Legislature Courts, Corrections, and Justice Interim Committee met here in September. Our Student Senate President Jasie Green, Director of Continuing & Adult Education Cecilia Romero and Director of Career & Technical Education Frank Loera joined me in informing the committee about how we at Northern are working with at-risk students to change lives. President Balderas let the committee know about our successes in student enrollment and the programs that are lifting our student up, including programs in high schools that he believes could be the future model for education in all rural communities. President Balderas would like to recognize staff and all the staff who assisted. It was an honor to lead that panel. This resulted in an invitation from Mimi Stewart to give introductory discussions on the funding formula

request and he thinks they might consider changing the funding formula for adult education based on Cecilia and some of the comments that we delivered. We put some of our own leaders and some of the data in front of them and they were very impressed. Peter Werth, a lot of legislators were very impressed with some of the things that are going on here so it was a real honor to introduce and having that panel. Congratulations to everyone for stepping up.

We joined the SHPE STEM Club, the nation's largest association dedicated to fostering Hispanic leadership in STEM, in hosting a General Motors Information Session, which provided information about internships and career opportunities at GM.

We also hosted a VA Tax Exemptions event, with representatives from the Rio Arriba County Assessor's Office and the VA guiding Española and Rio Arriba County veterans through the tax exemptions application process.

Our Native American Center hosted the Office of Navajo Nation Scholarship and Assistance Program to help students and Navajo community members complete their applications for funding for the 2025 Spring/Winter terms. This is the second time a dignitary as high as Roy Tracey was here and promoted scholarships and opportunities.

We are celebrating Indigenous Peoples' Day on campus today. I want to thank the Indigenous Peoples' Day Planning Committee for planning a wonderful day filled with Native Dancers, musicians and poets, great speakers and an horno bread baking demonstration. I encourage everyone to attend.

Congratulations to staff trying to raise the school spirit. We would like to invite you to join us for Eagle Mania, starting at 6 pm tomorrow. We'll have both women's and men's basketball scrimmages, a slam dunk contest, a 3-point shootout and a skills competition.

B. CUP/NMICC Report

President Balderas stated CUP/NMICC has been fairly quiet under than monitoring legislative committees.

C. NNMC Foundation

President Balderas introduced Judith Pepper; Major Gifts Officer presented the following:

1. FY25 Philanthropic Donations: July 2, 2024 to October 21, 2024 - $278,745.00 Last month we had an incredible donor, Glorianna Estencia which will go into the Northern Scholarship Fund. We have started the President's Eagle

Campaign to raise $1M and we finally got a date with a corporate donor who she will meet with a donor on the 7th or the 8th and ask them for $100,000 and this is the lead gift to that campaign. These $178,754 are also part of that campaign but are not the lead gift. We really want a local corporate donor. She is 99% confident and at the November Board meeting we can make the announcement and hopefully someone from there can be here to express their reason for the donor.

2. Pending Grant Applications: for President Eagle Campaign:

- Santa Fe Community Foundation – $20,000
- Presbyterian Foundation - $5000
- Zia Credit Union Foundation - $5000
- State Employees Credit Union Foundation - $5000
- N3B Foundation - $7500 – approved
  Nick and Judith are working on others, this is discretionary money and not tied to a specific program.
- Financial Aid will soon distribute these scholarships held by NNMC Foundation, totaling $204,000 for FY25 awards:
- Endowed Scholarship Awards - $68,000 for distribution -56 awards
- Maley Nursing Scholarship - $25,000 for distribution – 5, $5000 awards
- Northern Scholarship Fund - $50,000 from NNMC and $60,000 from donations =
  $110,000 for distribution – 110, $1000 awards
- Del Norte Credit Union Vanessa Valerio Nursing Scholarship –
  $1000 for distribution - 1, $1000 award

Ms. Pepper just learned N3B will provide 2 $9,000 scholarships to Science and Engineering Majors which comes from the Roy B. Post Foundation which hosts a conference in Phoenix. Those students awarded are then afforded an all-expense paid trip to the conference in the spring.

Ms. Pepper stated the visibility President Balderas has create at the college in the last 19 months has been extremely important in donors that they are involved in a successful and highly visible institution. This is important.

Regent Swentzell thanked Ms. Pepper for sharing a lot of things to celebrate and he appreciates her being at the College.

Regent Archuleta thanked Ms. Pepper for all her hard work and all she does for NNMC. It is much appreciated.

Regent Batista Dauz had no questions and thanked Ms. Pepper for being on campus and it is nice to see her around.

Board President Martin thanked Ms. Pepper.

D. Introduction of Staff and Faculty

President Balderas welcomed Jeremy Valdez, facilities tech and stated he would like to schedule a time for the Board of Regents to tour all the work that has been done thus far. The Executive Team and President Balderas will figure this out. There is a lot of construction going on and we know that Regents are very busy. But if there is a way that we can schedule maybe a couple of tours of what is going on. We have really put a lot of effort into a resurgence of trying to bring experts. We will try to figure out an efficient way to show the Board some of the progress but we have got potentially a laboratory being planned and designed for construction in one of our buildings, the CFA, we are trying to finish classrooms by January. Cosmetology, we might start a remodel of the three portables. The biggest challenge we have now is we have facilities and our private contractors literally burnt out. We have so many requests from different departments. We have probably remodeled like 13 bathrooms in the last 90 days. We are going to keep going This is something we are proud of. We have remodeled 13 bathrooms in the last 90 days. The tech guys, there is a lot of new LED lighting in El Rito and Espanola. We will entertain a way to show the Board of Regents the progress. President did want to welcome Jeremy Valdez.

Chair Martin stated at the last meeting Regent Velarde mentioned Coffee with the Board. We were not able to do that last month because Regent Velarde was not here because she is in Chicago. He would like the Board here for the November meeting with coffee with the board and tour of campus. President Balderas stated we will have two vehicles to take the Board around.

Regent Swentzell stated he did notice a new security vehicle and when it happened. President Balderas stated a new security vehicle was updated with a DPS grant. President Balderas stated sometimes it is like elbowing, initially they stated we didn't qualify because they told us the grant was for law enforcement certified officers. We went back and we said that is ridiculous. The spirit is safety and we used some of that funding, for those new vehicles and we also have a UTV so you will see a security UTV going around as well. But as you know, we keep you fairly briefed. We still have incidents of vandalism and some small activity of crime. But so, the more mobile or better equipment and training we can provide our safety teams. That is one of the improvements that we recently made. Regent Swentzell stated it looks better than the old truck. President Balderas stated it has created a good rivalry with folks. We are going to try to upgrade our fleet. Regent Swentzell stated it is nice. President Balderas stated we recently upgraded the athlete's fleet to long journey fleet. We are working on upgrading fleet for support services and some of our student service groups. Hopefully we will continue to work on these additions.

Chair Martin stated he found out Northern is the only comprehensive that has not been able to have an actual police force. The other comprehensives have a police force. He appreciates the help from the sheriff and city policy but he is sure the President is working on making the next step getting us to the same level. President Balderas stated we have researched it and it will require approval of the board when they are ready. There are some liabilities and fiscal concerns, we have to have a certain level of financial support to have a police department. We would be glad to put together an assessment for the Board to see if they would like to take the next step. Chair Martin stated there was an incident on campus but as time goes by, we seem to have more and more need for that component. President Balderas stated he is comfortable on certified officers and we have to be careful we have the right leadership in place and they have to be trained. We don't want to have untrained officers; and they get into a wrongful use of force or discharge, it could go both ways. President Balderas deferred to General Counsel.

Matt Baca, General Counsel stated the statute allows the board to commission a law enframement entity, just like a municipality, or a county or other subunit of government that is allowed to effectively create a commission law enforcement. That is the broad strokes of the regulatory framework. The question is really to President Balderas point of putting it together, making sure that it is first class professional, and then Mr. Baca thinks, this is not a legal question but you know if you look around, I think if you sheriff, state police, Espanola police, the challenge is finding qualified individuals to come services those, this is another thing the board will want to think through how are we going to develop this. You will be competing with those same departments.

President Balderas stated he would like to remind the committee; we have studies data. We have had incidents, with a weapon, situations with our security officers have had engagement that is not always the most conformable. Nothing violent but some engagement with low level activity. We are lucky because where we haven't made the leap, we did go out and got Geno Trujillo who is a retired Lieutenant with State Police, he has done 25 years. He got him off the couch off retirement so he represents that law enforcement strategy. We need to bring more information to the Board to see if this is something they would like to do. This is a decision for the Board and more information will be brought to the Board. We can put something together for this.

Chair Martin asked how this is funded at other institutions. Is it inequity in the funding formula and we don't get that funding. President Balderas stated this is a good question. Some of them get Federal Funding and they do build out a budget for FTE. We would qualify for some DOJ support. It would require more resources.

Regent Swentzell asked in that regard, he would recommend more data. One of the things as a lot of those other institutions are residentials, have residential programs where it really becomes much more pressing to have law enforcement. Students and

it might be something to think about. Being after his time it might be housing.

VII. FACULTY SENATE PRESIDENT REPORT

Faculty Senate President Brailey stated he only has one substantive item for the Board today. The Department of Engineering requested to eliminate a certificate of post baccalaureate certificate in information technology. The Education Policy Committed agreed and supported that, and the fact that they sent it as an endorsed it as well. It will go to the provost's desk next. Board President Martin asked if this was the first step. Mr. Braley stated this is the fourth step.

No questions from the Board of Regents.

VIII. STUDENT SENATE PRESIDENT REPORT

Ms. Green has been working closely with Sandy Krolick to get out Student Intramurals for 2025. Eventually a staff intramural eventually. We are also working on a homecoming week for the athletes. Leadership training begins tomorrow for 5 Fridays. Ms. Green has been working with Title V and Title III to create an event for students at Northern. It is called "Know Your Degree Plan of Study" and it is going to be for students to come for their certain day that their major is and learn about their program and learn about what classes they are going to need to take and they could graduate and when classes are offered.

Chair Martin stated Student Senate always does such a great job with Christmas gifts for the student's children and asked if they are thinking about doing that again. Student Senate President Green stated this is a topic for the meeting tomorrow to discuss this.

No questions from the Board of Regents. Board President Martin stated he appreciates all the efforts of Student Senate.

IX. STAFF REPORTS

A. Provost & Vice President for Academic Affairs

1. Faculty Handbook

Dr. Guerrero presented the Faculty Handbook (attached) to the Board of Regents.

Board President Matin asked if there were questions from the Board.

Regent Swentzell stated he appreciates the inclusion of the detail of the motion for full professor and moving that forward. He knows that was out there as an idea. Also, just to recognize the approval of this as a form of recognizing shared governance of the college and working between administration and the faculty collegiality of the college. He is looking forward to it.

Regent Archuleta - no questions

Regent Batista Dauz - no questions, thank you for your hard work on this.

Board President Martin entertained a motion to approve the Faculty Handbook.

Regent Swentzell moved to approve the new Faculty Handbook. Second - Regent Batista Dauz. A roll call vote was taken. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

B. Vice President for Finance & Administration

2. Approval of Easement Agreement between NNMC and North Central

Regional Transit District for Blue Bus Stop on Española campus

Mr. Baca stated in the packet there is a request to approve an easement agreement between the North Central Regional Transit District and the College. The North Central Regional Transit District is a public entity that runs what is popularly referred to and recognized as the Blue Bus. The Blue Bus has operated a stop on the Espanola campus, they tell him since approximately 2011. So, this agreement will formalize the legal relationship between the 2 entities for the operation of the stop. The Blue Bus has operated on the Espanola Campus since 2011. As you see in the document, it is a 20-year easement agreement subject to review in 2 decades, in the event that it is not rescinded. For some reason it will proceed as a month to month effectively, and then allow the Regents at that time to examine it, examine the relationship and son on and so forth. There is a tiny and, in the event, it is not rescinded, it will proceed as a month to month. There is a tiny sort of scrivener's error that he would like to thank Vince Lithgow for catching yesterday in advance of the audit meeting in Section 8. It refers to the city as opposed to Northern New Mexico College. So, when you make the motion to approve, assuming the Board will approve, Mr. Baca would ask that the Board qualify it, say, subject to the slight amendment of Section 8. Mr. Baca stood for questions.

Regent Swentzell asked if there was an agreement prior to this one. Mr. Baca stated yes. Regent Swentzell asked if there was an event to give rise to this. Mr. Baca stated there is probably both professionalization of the organization and a trigger of federal grant funding to make improvements to those bus stops which will be seen in the future. Through that process, the grantor is wanting to see the formal documentation to upgrade.

No other questions from the Board.

Board President Martin entertained a motion with the caveat.

Regent Swentzell moved to approve the easement agreement between NNMC and NCRTD with the amendment to section 8. Second – Regent Archuleta. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

2. Fiscal Watch Report - Action Required

Theresa Storey, Chief Financial Officer presented the Fiscal Watch Report to the Board of Regents (attached).

Regent Martin asked under capital projects for the Branch and this campus we are almost at $16M for this campus and $1.5M for El Rito. Are we going to spend this money by July. Ms. Storey stated no, not all of the $15.9M. This is appropriations that has a three-year expenditure. We are monitoring this and use of the funds. Board President Martin asked if we have a plan to spend this money. Ms. Storey stated all of it, she would say no, and some of that is reliant on those architectural drawings. We are still waiting on drawings for both campuses.

Regent Swentzell stated Ms. Storey answered some of his questions as they were going, one thing he brought up some time ago is increased interest and he sees interest investment earnings and asked if he has an update on this.

Mr. Lithgow stated this is from the state investment council from the permanent fun and a little bit from the State Land Office of which we are a beneficiary for both. Those banking interest on bank accounts goes into the general operating. Regent Swentzell asked if there was any investigation into increase. From his other hat they had to push their bank to be more equitable to increase the interest they are giving us. With all this money sitting in the bank they eventually increased it. With large amounts of cash, you can generate unencumbered funds. The banks don't like to give you and it is their business model and he gets it. Mr. Lithgow stated the interest we have accumulated from the bank has gone up. Now that markets are moving you can see the interest earnings go up. Chair Martin asked regarding the $16M for capital projects. Do they give you that money to go in the bank or no. Ms. Storey stated no

they don't, because of the health of the State, last year we did see some of that money out of the state general fund. We did see some of that. Some of the old appropriations are all drawdowns.

Regent Swentzell asked with that regard he knows inflation is concerning, especially construction, for funds that are appropriated for certain things, no longer hold the value to complete the projects. Is the State recognizing that fact or locked in. President Balderas stated they definitely are hammering us at the capital outlay committees with those kinds of questions, whether these projects are ready, bid at the right value. We recently had one in a laboratory which was underbid so we are having to kick in to fund that project. It is a relatively small one, we are matching $250,000. Speed and timing, that is what he was referring to earlier, we are lucky we have right now a good relationship with two contractor teams but it can dramatically change. Let's say these two teams are going to go work for Pojoaque or Santa Clara then we will literally be in a crisis a year from now. We can't compete with contractors in Santa Fe or Albuquerque. We are trying to build as much as we can while we have the contractors.

No questions from Regent Archuleta or Regent Batista Dauz.

Board President Martin entertained a motion to approve the Fiscal Watch Report as presented.

Regent Swentzell moved to approve the Fiscal Watch Report for the period ending September 30, 2024. A roll call vote was taken. Second – Regent Archuleta. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

3. Budget Adjustment Requests

Theresa Storey, Chief Financial Officer stated this is an informational item and presented the Budget Adjustment Requests to the Board of Regents (attached).

Regent Martin asked if this number is growing. Ms. Storey stated it is growing as grants are growing and the budget is growing. Regent Swentzell stated he likes this. It is a lot better because the old bars used to be pages and pages.

Regent Swentzell asked if this was for approval. Board President Martin stated this is an informational item.

X. EXECUTIVE SESSION

None.

XI. POSSIBLE ACTION ON EXECUTIVE SESSION

None.

XIII. ADJOURNMENT

Board President Martin entertained a motion to adjourn.

Regent Archuleta moved to adjourn. Second – Regent Batista Dauz. A roll call vote was taken. Second – Regent Archuleta. Chairperson Martin – yes, Regent Swentzell – yes, Regent Archuleta – yes, Regent Batista Dauz – yes. Motion passed unanimously.

The Board of Regents adjourned at 10:12AM.

Approved:

_____
Michael A. Martin
Board President

_____
Erica Velarde
Vice President

Office of the Provost
NORTHERN New Mexico College

MEMORANDUM

To: Board of Regents - Northern New Mexico College

From: Dr. Larry Guerrero, Interim Provost, and VP for Academic Affairs

Date: November 21, 2024

Re: Approval of a Certificate in Technical Trades - Heating, Ventilating, Air Conditioning Technology (HVAC)

Issue
Northern New Mexico Branch Community College wants to offer a Certificate in Technical Trades (HVAC) by 2025.

Overview
The attached document discusses the needs and characteristics for this Certificate in this region. These programs were developed in an effort to address the human resource needs of this growing industry and continue to offer our students access to the emerging trends in carpentry. The certificate is an essential step for NNMC to respond to this demand.

The implementation costs of this program will be covered by Mill-Levy revenue. Moreover, students who graduate with this certificate will help NNMC acquire credit for these accomplishments in the NM funding formula.

This certificate has been vetted and recommended by the Faculty Senate, the Provost and the President.

Recommendation
I recommend that the Board of Regents approve the new Certificate in Technical Trades (HVAC).

Office of the Provost
NORTHERN New Mexico College

Branch Community College

Academic Program Policy

Purpose
To provide a consistent methodology for developing and implementing new academic programs, including certificates, associate degrees, and bachelor's degrees.

Policy
The Board of Regents approves all new academic programs offered by the Northern New Mexico College (NNMC). All new academic programs proposals must follow the procedure developed by the NNMC Administration (described in the **NNMCC New Academic Program Flow Chart**). Proposals will follow the template **NNMCC Academic Program Approval Form** in this policy. All Proposals shall comply at a minimum with the **Criteria for New Academic Program Approval** of this policy.

Procedures
New Academic Proposals are to be submitted on **New_Acad_Program_Form** and will follow the steps of the New Academic Program Approval Process Flow Chart in this policy. Upon completion of all the steps in the flowchart, the Board of Regents will make one of three recommendations regarding the Proposal:

1. Denial
2. Approval Pending Additional Planning
3. Approval

A partially completed proposal may be submitted to obtain an "Approval Pending Additional Planning" status to the Office of the Provost, which will determine the degree of the feasibility of offering a particular academic program. If the Office of the Provost approves "pending additional planning," then a complete proposal may be submitted to the rest of the process in the Flow Chart.

When all steps have been completed, the Office of the President will submit all Academic Program Proposals to the Board of Regents at their next regularly scheduled meeting for their first reading. When the Board of Regents has no significant concerns or suggested changes, the Office of the President will re-submit the Proposal to them at their next regularly scheduled meeting for final approval.

Denial will be recommended for proposals that do not meet the criteria for new program development or which are missing key data elements or contain concerns that may be addressed in a resubmission.

Approval Pending Additional Planning will be recommended for proposals that, while meeting other of the criteria, provide evidence that key programmatic components and/or resources are not in place to implement the program.

In order to receive implementation approval, relevant evidence must be presented to the Office of the Provost in a subsequent status report that the key programmatic components and/or resources are no longer missing. After such evidence has been provided, the Proposal may continue with the approval process

Approval will be recommended for proposals that meet all criteria for new program development. No further submissions will be required, and, subsequent to Board approval, institutions may offer the new program at a date no sooner than that stipulated in the Proposal.

Implementation A new academic program will be implemented after the Higher Education Department, the Higher Learning Commission, and the U.S. Department of Education have approved the program for implementation. Depending on the nature of the program, other agencies may need to support or approved the program before implementation. The program shall not be marketed in any form until all external approvals have been granted.

Criteria for New Academic Program Approval

1. The proposed program relates to the institutional mission statement as contained in the Strategic Plan.

2. The proposed program does not duplicate other NNMCC offerings or, otherwise, provides a convincing rationale for doing so.

3. There is evidence that planning for the proposed program has been a collaborative process involving academic units and offices of planning and budgeting at the institutional level, as well as external advisory committees, representatives of the community, surveys and/or other analysis which verifies the demand and support for said Proposal, etc.

4. The Proposal provides a reasonable timetable of events leading to the implementation of the proposed program.

5. The Proposal provides evidence that there is a need for more people to be educated in this program at this level.

6. The Proposal contains reasonable estimates of headcount and FTE students who will major in

the proposed program.

7. The Proposal provides an appropriate, sequenced, and described course of study.

8. For bachelor's programs, the total number of credit hours does not exceed 120;; otherwise, the Proposal provides a reasonable argument for an exception to the 120 credit hours maximum.

9. The program meets the General Education requirements in New Mexico, when applicable, and maximizes the number of courses that are included in the common course system in New Mexico.

10. The proposed program relates to specific institutional strengths such as programs of emphasis, other academic programs, and/or institutes and centers.

11. If there have been program reviews or accreditation visits in the discipline pertinent to the proposed program or in related disciplines, the Proposal cites recommendations that were made and provides evidence that progress has been made in implementing those recommendations.

12. The Proposal provides evidence that the institution has analyzed the feasibility of providing all or a portion of the proposed program through distance learning technologies via its own technological capabilities as well as through collaboration with other universities.

13. The Proposal provides evidence of sustainability in terms of enrollment revenues versus the cost of the program. It also provides a complete and reasonable budget, reflecting the text of the Proposal. Costs for the program should reflect costs associated with similar programs at other HED institutions.

14. The Proposal provides evidence that the faculty, in aggregate, have the necessary experience and research activity to sustain the program.

15. The Proposal provides evidence that, if appropriate, there is a commitment to hiring additional faculty in later years, based on estimated enrollments.

16. The Proposal provides evidence that library resources are sufficient to initiate the program.

17. The Proposal provides evidence that classroom, teaching laboratory, research laboratory, office, and any other type of space that is necessary for the proposed program is sufficient to initiate the program.

18. The Proposal provides evidence that necessary and sufficient equipment to initiate the program is available.

19. The Proposal provides evidence that, if appropriate, fellowships and scholarships are sufficient to initiate the program.

20. The Proposal provides evidence that, if appropriate, clinical and internship sites have been arranged.

21. The Proposal provides a complete and reasonable budget, reflecting the text of the Proposal. Costs for the program should reflect costs associated with similar programs at other Higher Education institutions.

22. In the event that resources within the institution are redirected to support the new program, the Proposal indicates the source from which funds will be redirected and provides evidence that such redirection will not have a negative impact on other programs.

23. The Proposal provides evidence that community college articulation has been addressed and ensured, when applicable.

24. For disciplines where specialized accreditation is available, the Proposal indicates whether the institution will seek such accreditation for the proposed program. If the institution indicates that specialized program accreditation will not be sought, adequate justification is provided.

25. The Proposal provides evidence that the academic unit(s) associated with a new degree has been productive in teaching, service, scholarship, and research, where appropriate.

NOTE: The website will have the most current version.

New_Acad_Program_Form

Northern New Mexico College
New Degree Program Approval Form
Version Fall 2022

Type in the designated areas. Please do not alter any element of the form.

1	Initiator:	Joseph Padilla		Date: 8-28-2024	
2	Subject area:	Skilled Trades			
3	Academic division:	Technical Trades			
4	Proposed title for New Curriculum Program: **Heating, Ventilation, Air Conditioning (HVAC)**				
5	To begin:2025	Semester:	Spring	Academic Year:	2025
6	Degree or certificate to be offered: **HVAC Certificate**				
7	Provide the Program Catalog Description: **The Heating, Ventilating, Air Conditioning (HVAC) Technology program will train you in operating and maintaining various types of heating, ventilation, air conditioning, refrigeration, and HVAC accessories. Earn a Certificate and pursue work as an HVAC Technician.**				
8	Please provide a tentative timeline for program implementation (including a **Gantt Chart**)				
	NEED				
9	Describe and provide evidence that the program is needed by the local and regional community (including job availability data) and provide evidence that there is student demand for the program. Respond to what are opportunities, external to the College, that support the new program (e.g., employer data, demographics, numbers of prospective students, market trends for the field, etc.)? **HVAC has a 6% growth rate according to the U.S. Department of Labor and is in the category of highest wages and need for occupations in the State of New Mexico. Additionally, HVAC is the following pathway in the Plumbers and Pipefitters Apprenticeship program pathway.** Provide the Score Cards from Gray Associates for the related CIP codes for this program in **Appendix D**.				
10	Provide evidence and explain how the degree/credential proposed (bachelor vs associate vs certificate) is the correct fit for the program proposed. Provide the complete degree sheet of the program in Appendix A (Part I). Additionally, provide the Curriculum Efficiency Analysis in Appendix A (Part II). **Choosing between an HVAC certificate and an HVAC degree depends on your career goals, time commitment, and financial situation. Here are some reasons why an HVAC certificate might be considered better for some people:** **Shorter Time Frame: HVAC certificate programs are typically shorter than degree programs, often taking less than a year to complete. This allows you to enter the workforce more quickly.** **Lower Cost: Certificate programs generally cost less than degree programs, making them a more affordable option. This can be particularly appealing if you're looking to start your career without incurring significant debt.** **Focused Curriculum: HVAC certificates usually offer a more focused curriculum centered around practical skills and technical knowledge specific to heating, ventilation, and air conditioning systems. This hands-on approach can be directly applicable to the job market.** **Industry Recognition: Many employers prioritize relevant certifications over formal degrees for technical positions. An HVAC certificate can demonstrate your commitment to the field and your proficiency in specific skills, which can be valuable when seeking employment.**				

Job Readiness: Certificate programs often include hands-on training and internships, which can better prepare you for the practical demands of the job. This immediate, real-world experience can be advantageous when starting out in the industry.

Licensing Requirements: In many areas, having an HVAC certificate can meet the educational requirements for obtaining necessary licenses and certifications. This is essential for legally working as an HVAC technician.

Flexibility: Many certificate programs offer flexible schedules, including evening and online classes, which can be beneficial if you're working or have other commitments.

While an HVAC degree can provide a broader educational foundation and may offer more comprehensive training in areas like business management or advanced engineering concepts, a certificate is often sufficient for entry-level positions and can be a quicker route to starting your career in HVAC.

11 What are the College's strengths that would support offering the program (e.g., trained staff, facilities, adequate budget, sustainability, etc.)?

NNMCC currently has trade pathways in Plumbing/Pipefitting and Electrical with Carpentry in the approval process. HVAC technology fits in each of these building trades as an extension of a complete building trades Skilled Training agenda.

Plumbing/Pipefitting: HVAC systems often involve complex piping and ductwork, so skills in plumbing and pipefitting are directly transferable. Understanding the principles of fluid dynamics and pipe installation can enhance HVAC system design and maintenance.

Electrical: HVAC systems require significant electrical work for wiring, control systems, and integration with building management systems. Electrical skills are essential for troubleshooting and maintaining HVAC components.

Carpentry: Carpentry skills are useful for the installation and maintenance of HVAC systems, especially when it comes to building supports, framing, or creating access panels. Carpentry can also play a role in integrating HVAC systems into existing structures.

By offering HVAC training, you can provide students with a well-rounded skill set that covers all aspects of building systems. This approach not only increases their employability but also improves their ability to work on complex projects that require a multidisciplinary approach.

12 What are the College's weaknesses that must be overcome to offer the program?

The college has only recently provided lab space at the Espanola campus and still has not provided classroom space for the Technical trades department. Space usage and facility support.

14 What are the threats external to the College that would need to be dealt with (e.g., demographic shifts, new regulations, new infrastructure, etc.)?

Secondary Dual Credit programs insistent Faculty drive to their remote locations for instruction

15 Describe how the program fits with College's mission, strategic goals, and strategic initiatives

CURRICULUM

Program mission:

16 **To provide comprehensive, high-quality HVAC (Heating, Ventilation, and Air Conditioning) training that equips students with the technical skills, industry knowledge, and practical experience necessary to excel in the HVAC field. Our program aims to foster a deep understanding of HVAC systems, enhance problem-solving abilities, and ensure students are prepared for certification and career advancement in a rapidly evolving industry.**

17 Provide the program objectives, provide the curricular degree sheet, and syllabi for all courses (syllabi are needed before it goes to the (BCC faculty Committee) **Curricular Degree Sheet and Syllabi Attached**

18 List the Program-level Student Learning Outcomes

Knowledge Acquisition: Ensure students gain a thorough understanding of HVAC principles, systems, and components.

Practical Skills: Develop hands-on skills through lab exercises and real-world simulations.

Certification Readiness: Prepare students for HVAC certification exams with focused training and practice.
Career Preparation: Equip students with the tools and knowledge necessary for a successful HVAC career, including resume writing and job interview techniques.
Industry Relevance: Stay current with industry standards and technological advancements to provide up-to-date training.
Also: **See Program Assessment Plan Appendix B part II**

19 Curriculum matrix (outcomes by courses in the major). Provide this as Appendix B (Part I)
See Appendix B part I

20 Describe the coordination with other College programs:
Coordination with other college programs includes scheduling academic core content courses required of this program that does not conflict with core content scheduled courses. Additionally, coordination with other trade programs will be done to limit the space use of Laboratory facilities and needed lecture space. Where possible, use of learning equipment will be shared with other departments and courses that offer like core content will be considered for course substitutions on an individual basis.

21 Explain the articulation agreements that the program will have with programs offered by other institutions:
The New Mexico Higher Education Department is currently adopting a common course identifier program in Trade courses. This pathway has been completed. Courses identified in this pathway have the same course description and learning outcomes of these trade courses in all post-secondary institutions in New Mexico for transferability purposes. Additionally, this content is Part of the pathway of a Plumber/Pipefitter Apprentice after completion of the first three years of training. NNMCC offers trade courses to this union.

22 What plans is the plan for the delivery of courses modalities (e.g., distance education, face to face, hybrid, others)? Please provide an analysis of the competition that the program will have based on the selected delivery modality.
Trade courses are more successful face to face with direct, hands on learning. Online modalities will be utilized only for theoretical lectures and descriptive examples. Hybrid modalities will be used for student cohorts that have distance gaps for attendance. Laboratory lessons will occur face to face with lessons leading, describing and explaining a hands on function can be offered through media functions.

23 Describe the standards and practices that will be implemented for Prior Learning Assessment (PLA) within this program. **See Credit for Prior Learning Addendum attached** and at: https://nnmc.edu/wpcontent/uploads/2023/09/Credit_for_Prior_Learning_Guidelines_9.23.pdf

24 Describe the membership of the External Advisory Committee and the role that they have played in the development of Curriculum and Program-Level Student Learning Outcomes.
An External Advisory Committee includes the Southwest Plumbing and Pipefitting JATC that have reviewed with the Chair of Trades to the curriculum and instructional pathway that will meet the needs of industry and have pledged to continue serve as an external program review committee. A Second External Committee is the Workforce Integration network (WIN)

25 Please indicate if this program falls within the umbrella of another program currently offered (for example, if the new program is an associate degree that consists of a subset of courses already offered by one or more bachelor programs, or whether the program is the result of a combination of courses already offered by the institution through other programs). Please indicate if a new CIP code is needed or already exists under the CIP codes approved for NNMC. **This program will reside under the Plumbing AAS degree program but will require a separate CIP number of: 47.0201- Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician- Architecture & Construction**

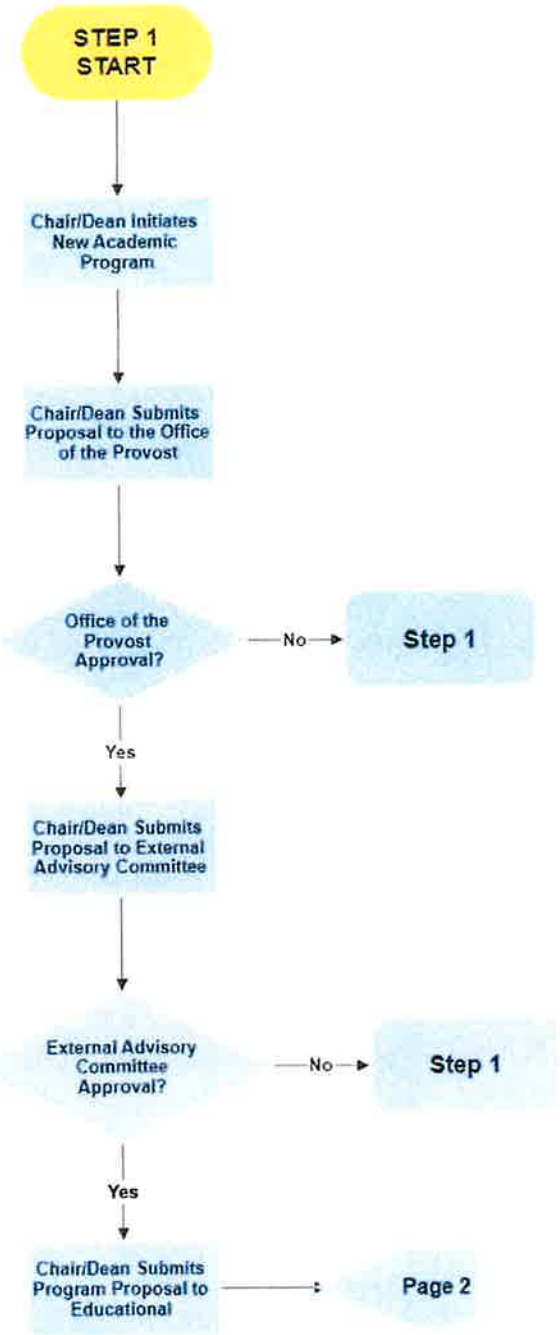
ASSESSMENT

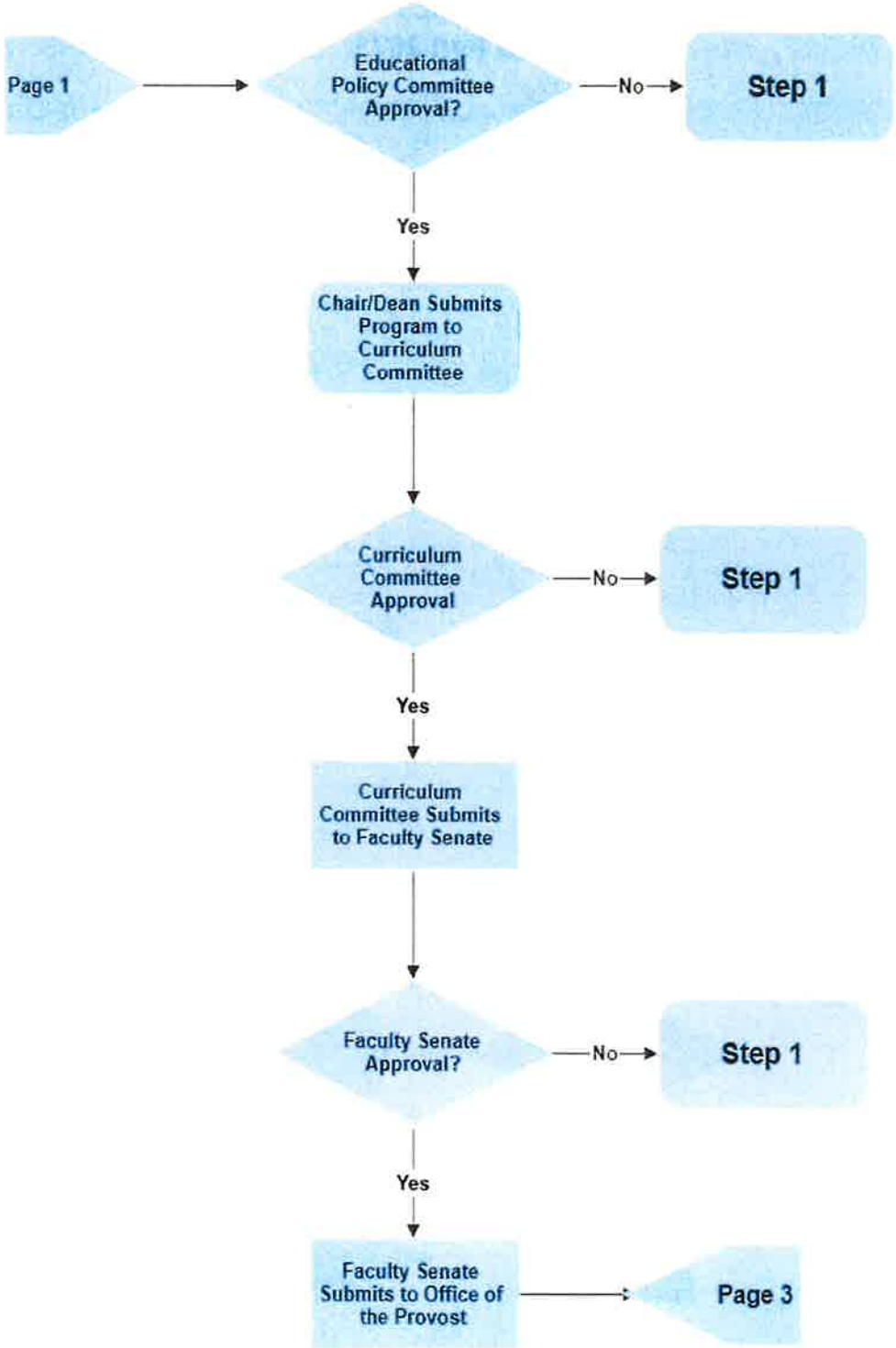
26 Plan for program assessment and evaluation of program-level student learning outcomes. Provide this section in Appendix B (Part II) See **Appendix B (Part II)**

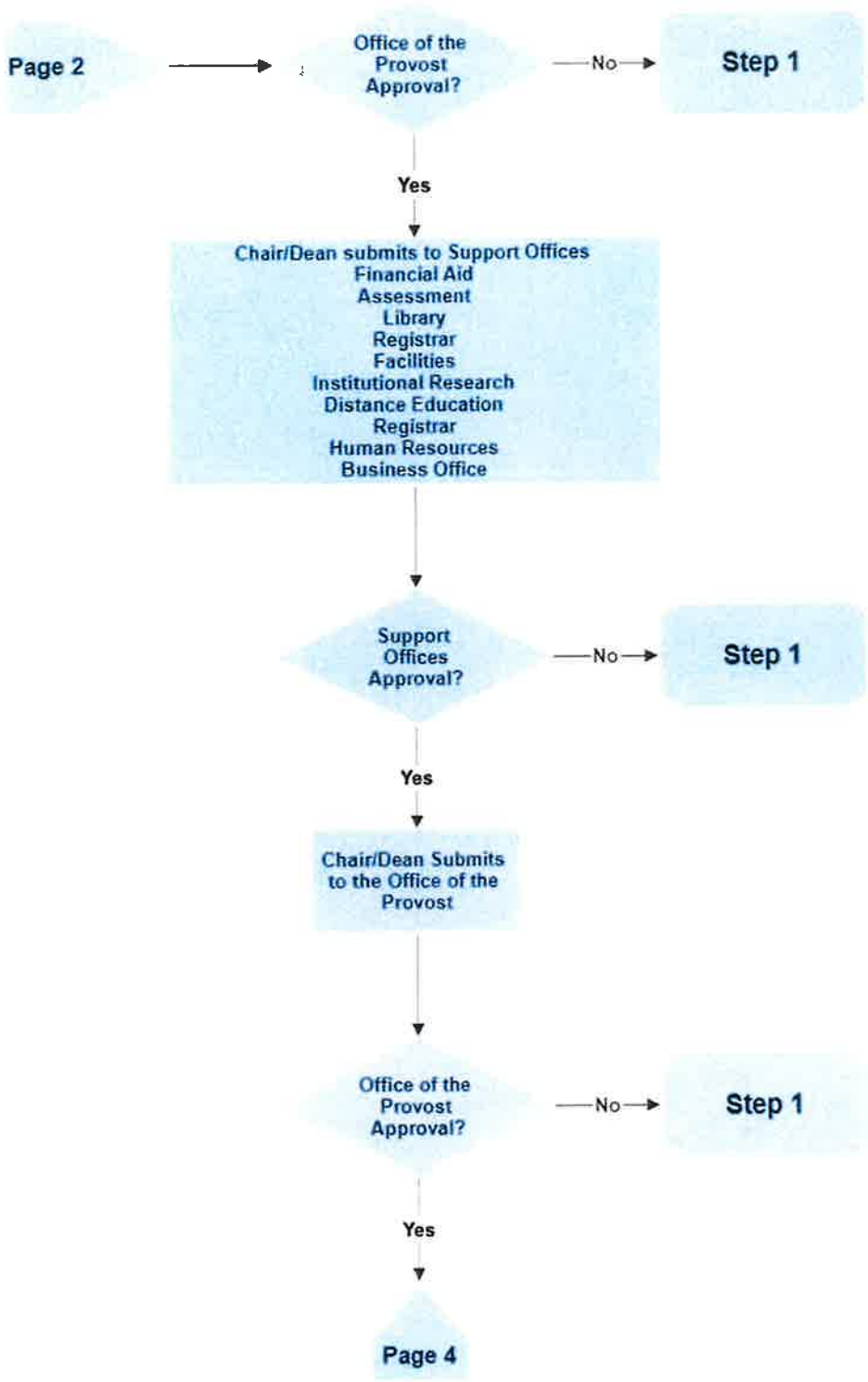
SUPPORT AND SUSTAINABILITY

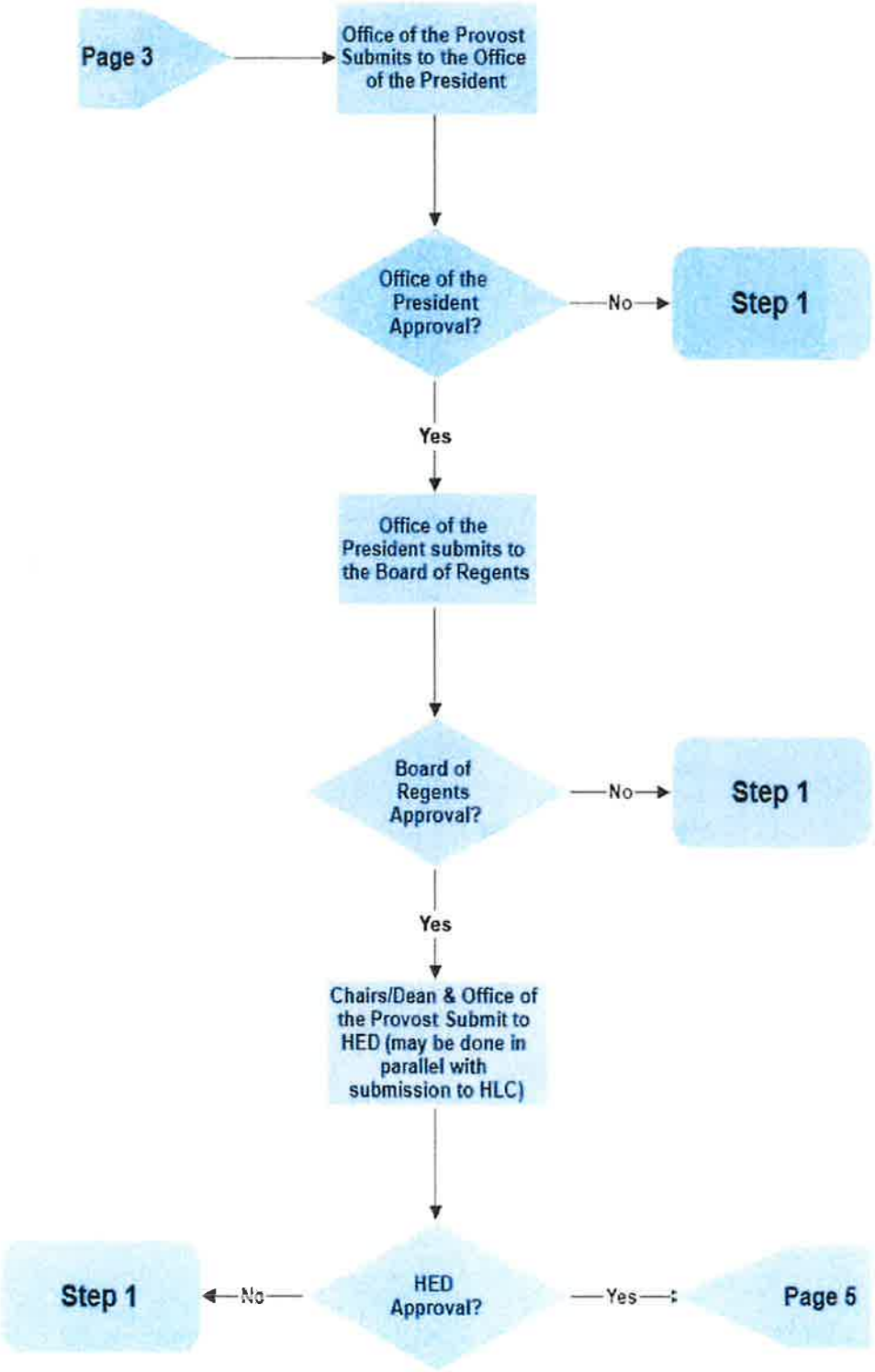
27	Describe the faculty will serve in this program and their credentials. Please describe if new faculty is needed. If no new faculty members are needed, please describe how the current faculty will serve this program and what will be the impact in the current areas that those faculty members are serving **One new faculty member will be required for this program.**
28	Describe precisely facility needs including, but not limited to identifying the office space for full-time faculty, adjunct faculty, administrative assistants. Identify the classrooms, labs, and instrumentation that this program will be required **The program has two locations identified to operate. The El Rito campus. The CTE Building being restored exists with plumbing/pipefitting and welding equipment, there are donated pieces of equipment. Tis shop serves the dual credit programs of NNMCC High School Dual Credit partners.** **The Espanola campus can serve the Espanola Valley High School dual credit trade program and adults form surrounding communities. The shop here has been undergoing clean up and modifications and is now ready to accept equipment for this proposed HVAC program Office space availability exists at either campus**
29	Describe the annual budget for this program for the first five years, the projected enrollment per year (including new headcounts part-time, full-time, graduates, dropouts), and the projected revenue. Include spreadsheets and explain clearly the assumptions. Please provide this section in **Appendix C.**
30	Describe the plans for sustainability (including a five-year enrollment projection with revenue and cost projections) **Appendix C**
31	Describe the strategic enrollment plan for the program and how it is aligned with the college strategic enrollment plan **The Department will coordinate with the NNMC Communication and Marketing department to relay the opportunities of this program regionally through a media marketing campaign. The effort will also include the support and endorsement of the Southwest Plumbing and Pipefitter JATC and the New Mexico Northern Regional Development Corporation. These organizations have multiple employers for placement of students once trained in this pathway. The pathway to a carpentry apprenticeship/employment will be highlighted. The pathway will be introduced to the secondary school districts and offered as dual credit to build future enrollment capacity.**
32	Explain what external agencies (other than the Higher Education Department, the Higher Learning Commission, the U.S. Department of Education) need to approve (or must be notified) before the implementation of the program **N/A**

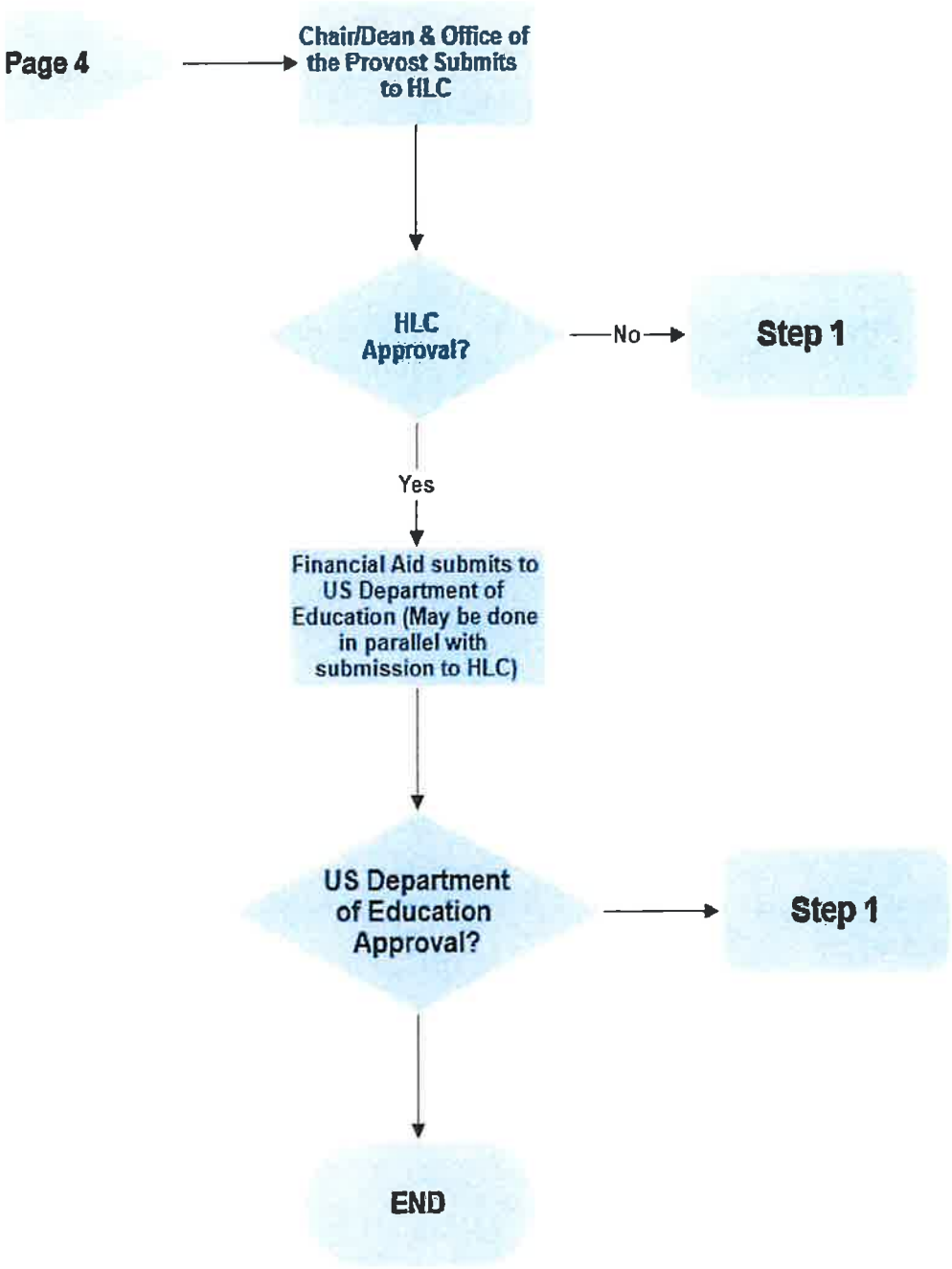
Branch Community College Academic Program Approval Process – Version Fall 2023




Page 1
Educational Policy Committee Approval?
No
Step 1
Yes
Chair/Dean Submits Program to Curriculum Committee
Curriculum Committee Approval
No
Step 1
Yes
Curriculum Committee Submits to Faculty Senate
Faculty Senate Approval?
No
Step 1
Yes
Faculty Senate Submits to Office of the Provost
Page 3


Page 2
Office of the Provost Approval?
No
Step 1
Yes
Chair/Dean submits to Support Offices
Financial Aid
Assessment
Library
Registrar
Facilities
Institutional Research
Distance Education
Registrar
Human Resources
Business Office
Support Offices Approval?
No
Step 1
Yes
Chair/Dean Submits to the Office of the Provost
Office of the Provost Approval?
No
Step 1
Yes
Page 4


Page 3
Office of the Provost Submits to the Office of the President
Office of the President Approval?
No
Step 1
Yes
Office of the President submits to the Board of Regents
Board of Regents Approval?
No
Step 1
Yes
Chairs/Dean & Office of the Provost Submit to HED (may be done in parallel with submission to HLC)
Step 1
No
HED Approval?
Yes
Page 5



Approved by the Board of Regents on 11/17/2005
Amended by NNMC President on 10/25/2021

Appendix A (part I)

DEGREE SHEET / 2024-2025 CATALOG
Student name:
Eagle ID:
Eagle Email:
Phone:

Certificate of
Heating, Ventilation and Air Conditioning (HVAC)
(Plumbing/Pipefitting Technology)

The Heating, Ventilating, Air Conditioning (HVAC) Technology program will train you in operating and maintaining various types of heating, ventilation, air conditioning, refrigeration, and HVAC accessories. Earn a Certificate and pursue work as an HVAC Technician.

PROGRAM REQUIREMENTS (15 Credits)	**SEMESTER**	**GRADE**
HVAC 1105 Fundamentals of Refrigeration (3) *Pre-requisite: None*		
HVAC 1110 Basic Electricity (3) *Pre-requisite: HVAC 1105*		
HVAC 1115 Refrigeration Management (3) *Pre-requisite: HVAC 1110*		
HVAC 1120 Motors and Controls (3) *Pre-requisite: HVAC 1115*		
HVAC 1235 Air Conditioning and Controls (3) *Pre-requisite: HVAC 1120*		
TOTAL CREDITS 15		
ADVISOR APPROVAL	**DATE**	

SUGGESTED SEQUENCE OF COURSES

FIRST SEMESTER (16 Credits)
HVAC1105 Refrigerant Fundamentals (3)
HVAC 1110 Basic Electricity (3)
HVAC 1115 Refrigeration Management (3)
HVAC 1120 Motors and Controls (3)
HVAC 1235 Air Conditioning and Controls (3))

NORTHERN NEW MEXICO COLLEGE

HVAC 1105 SYLLABUS

Course Number Course Name	HVAC 1105 Fundamentals of Refrigeration
Credit Value (Breakdown of theory and lab credits)	3 (1.5 Theory and 1.5 Lab)
Catalog Course Description	Demonstrate the ability to perform HVAC/R Technician duties in a safe manner. Accurately perform HVAC/R related calculations and interpret results for the purpose of diagnosis, repair, or installation of HVAC/R equipment and systems. Professionally communicate in oral and written forms. Demonstrate the use of current industry techniques including tools, testing equipment, manufacturers' apps. Determine the appropriate ethical action that should occur in a given circumstance. Work effectively in a team-based environment. Possess a mastery of the refrigeration cycle and its components. Pre-requisites: None
Student Learning Outcomes/Objectives /Competencies of the Course	Student Learning Outcomes: • Demonstrate working knowledge of heat theory, safety, and temperature/pressure/volume gas laws as they relate to the refrigeration cycle. • 2. Identify and demonstrate heat transfer by conduction, convection, and radiation and describe their effects on temperature change using latent and sensible heat transfer. • 3. Safely demonstrate the refrigeration process using system components such as compressors, condensers, evaporators, metering (expansion) devices and accessories. • 4. Demonstrate a knowledge of industry standards for system installation of equipment and tubing and safely demonstrate tubing operations including cutting, reaming, flaring, swaging, and brazing."
College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Communication* *Critical Thought*

NORTHERN NEW MEXICO COLLEGE

HVAC 1110 SYLLABUS

Course Number Course Name	HVAC 1110 Fundamentals of Electricity
Credit Value (Breakdown of theory and lab credits)	3 (3.0 Theory)
Catalog Course Description	Introduces the student to electrical theory, generation and distribution, OHM's Law, series and parallel circuits, A/C / D/C, practical applications and electrical safety. Pre-requisites: HVAC 1105
Student Learning Outcomes/Objectives /Competencies of the Course	Student Learning Outcomes: • Demonstrate the use of industry practices: safety, use of lockout/tagout, diagnosing, repairing, and installing electrical components in HVAC/R equipment and systems • 2. Use of test instruments both digital and analog • 3. Comprehension of wiring diagrams, proper use of tools specific to the industry • 4. Mastery of electrical theory and circuits, single-phase and three-phase applications • 5. Use of symbols and terminology, and the ability to communicate professionally in oral and written forms.
College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Communication* *Critical Thought*

NORTHERN NEW MEXICO COLLEGE

HVAC 1115 SYLLABUS

Course Number Course Name	HVAC 1115 Refrigeration Management
Credit Value (Breakdown of theory and lab credits)	3 (2.0 Theory 1 Lab)
Catalog Course Description	This course will stress the accepted practices and proper procedures to handle refrigerate materials. The course will educate the student in the proper procedures for safely conducting leak detection, evacuation, recovery and charging systems. Students will prepare for and take the Universal CFC Refrigerant Handlers Certification exam, which is required by the EPA. This certification is required to handle and service all types of refrigeration equipment containing and using refrigerants. Students must pass the exam with a 71% and be able to successfully perform evacuation, recovery, and charging of systems for Type 1, Type 2 and Type 3 procedures. Pre-requisites: HVAC 1110
Student Learning Outcomes/Objectives /Competencies of the Course	Student Learning Outcomes: • Demonstrate the use of industry practices: safety, use of lockout/tagout, diagnosing, repairing, and installing electrical components in HVAC/R equipment and systems • 2. Use of test instruments both digital and analog • 3. Comprehension of wiring diagrams, proper use of tools specific to the industry • 4. Mastery of electrical theory and circuits, single-phase and three-phase applications • 5. Use of symbols and terminology, and the ability to communicate professionally in oral and written forms.
College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Communication* *Critical Thought*

NORTHERN NEW MEXICO COLLEGE

HVAC 1120 SYLLABUS

Course Number Course Name	HVAC 1120 Motors and Controls
Credit Value (Breakdown of theory and lab credits)	3 (1.0 Theory 2 Lab)
Catalog Course Description	Covers primary and control circuits in various applications, troubleshooting and components. Emphasizes attention to motors and starting devices. Pre-requisites: HVAC 1115
Student Learning Outcomes/Objectives /Competencies of the Course	Student Learning Outcomes: • Demonstrate industry safety practices. • 2. Use electrical meters appropriately to test and identify voltages in both single- and three-phase systems. • 3. Size and test fuses/breakers and safely replace them. • 4. Define or explain the use or function of contactor/starters. • 5. Demonstrate proper use of test equipment for testing contactor/starters and motors. • 6. Measure compressor windings and operating amps and determine if they are correct. • 7. Demonstrate proper use of a megohmmeter and check winding insulation. • 8. Use a continuity tester to determine whether an open circuit or dead short exists. • 9. Define and explain the use or function of capacitors; calculate capacitance. • 10. Use a capacitance meter to measure run and start capacitors. • 11. Determine the electrical characteristics of both series and parallel circuits. • 12. Explain electric motor theory (i.e., magnetism, electromotive force, etc.) • 13. Explain operation and application of capacitor start induction run motor (CSIR), capacitor start capacitor run motor (CSCR), permanent split capacitor (PSC), and shaded pole. • 14. Describe starting components associated with single-phase motors. • 15. Explain the significance of power factor. • 16. Determine physical conditions of motor bearings and rotors. • 17. Draw and explain the starting and run circuit for a single-phase CSIR compressor using a current type-starting relay, the starting and run circuit for a single-phase CSCR compressor using a

	potential starting relay, and draw and explain the circuit for a PSC compressor. • 18. Identify the fundamentals types of electric motors, listing basic characteristics. • 19. Describe the basic application where these motors are used in the industry. • 20. Be able to wire and troubleshoot the motors starting devices used in the industry. • 21. Apply principles of fundamental motor diagrams as they relate to motor controls and overload protection. • 22. Demonstrate procedures used for troubleshooting motors and control components. • 23. Apply principles of electricity using rating, and current to describe service factors. • 24. Define capacitance and identify it's use as it relates to motors.
College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Information Competency and Research* *Critical Thought*

NORTHERN NEW MEXICO COLLEGE

HVAC 1235 SYLLABUS

Course Number Course Name	HVAC 1235 Air Conditioning and Controls
Credit Value (Breakdown of theory and lab credits)	3 (1.0 Theory 2 Lab)
Catalog Course Description	Covers installation, service and maintenance of air conditioning and heat pump systems. Pre-requisites: HVAC 1120
Student Learning Outcomes/Objectives /Competencies of the Course	1. Interprets model numbers and nomenclature so as to ascertain application and capacity of any listed component or system. 2. Evaluate system performance based on information obtained from readings and manufacturer's performance charts, using gauges, electrical test equipment and thermometers above listed systems for proper operation, and make repairs as needed. 3. Describe the steps necessary to: -assemble, pipe together, pressure-up, leak check, evacuate, charge, and operate any listed system, -recover, recycle, and reclaim refrigerant, services in layman terms, -connect wiring, check, integrity of electrical components, and gather electrical data for any listed system, -ohm out motor, and the ""hopscotch"" method of troubleshooting. 4. Utilize schematics and wiring charts in order to determine operating characteristics and ampacity of listed systems. 5. Demonstrates the proper and safe use of tools and instruments such as clamp on amp meter, Digital Multimeter, Capacitor Checker, recording and electronic thermometers, trouble shoot electrical problems using the ""hopscotch"" method, removing and replacing any component on the above listed systems. 6. Use a schematic and electrical test instruments to trouble shoot and repair labs systems such as A/C Heat Pump, Roof Top combo and Split system.
College-Wide Student Learning Outcomes	*College Wide Student Learning Outcomes:* *Information Competency and Research* *Critical Thought*

Appendix A (Part II)

The HVAC Training Certificate program is a generally efficient training program, effectively meeting its educational objectives and preparing students for certification and employment. The program's strengths include:

- **Curriculum Alignment:** Courses cover essential HVAC skills and knowledge, aligning well with industry standards and certification requirements.
- **Practical Training:** Hands-on labs and simulations provide students with valuable practical experience.
- **High Completion and Employment Rates:** The program boasts a strong completion rate and high job placement, reflecting its success in preparing students for the workforce.

However, to enhance the program's relevance and effectiveness further, the following areas should be continually addressed:

- **Content Gaps:** Integrate training on emerging technologies, such as smart HVAC systems and advanced climate control, and include modules on customer service and communication skills to better prepare students for client interactions and career advancement.
- **Feedback Integration:** Use feedback from industry professionals (UA 412 Plumbing and Pipefitters JATC) and students to make data-driven adjustments to the curriculum. This will help address any identified gaps and ensure the program remains aligned with current industry needs and expectations.

Recommendations for Continuous Improvement:

1. **Curriculum Updates:** Regularly update course content to incorporate new technologies and industry practices. Consider adding specialized modules on advanced systems and green technologies.
2. **Enhanced Training:** Develop and integrate training on soft skills, such as customer service and effective communication, which are critical for client interactions and professional growth.
3. **Industry Collaboration:** Strengthen partnerships with industry professionals to ensure the curriculum stays relevant and reflects the latest trends and technologies.
4. **Ongoing Feedback:** Implement a structured process for collecting and analyzing feedback from students, instructors, and employers to continuously refine and improve the program.

By identifying these recommendations up front and maintaining a focus on continuous improvement, the HVAC Training Certificate program will remain competitive, relevant, and valuable for future students, ensuring they are well-prepared for careers in the evolving HVAC industry.

Addendum B-I

HVAC 1105

Introduction to Fundamentals of Refrigeration

Course Description

Demonstrate the ability to perform HVAC/R Technician duties in a safe manner. Accurately perform HVAC/R related calculations and interpret results for the purpose of diagnosis, repair, or installation of HVAC/R equipment and systems. Professionally communicate in oral and written forms. Demonstrate the use of current industry techniques including tools, testing equipment, manufacturers' apps. Determine the appropriate ethical action that should occur in a given circumstance. Work effectively in a team-based environment. Possess a mastery of the refrigeration cycle and its components

Student Learning Outcomes

1. Demonstrate working knowledge of heat theory, safety, and temperature/pressure/volume gas laws as they relate to the refrigeration cycle.
2. Identify and demonstrate heat transfer by conduction, convection, and radiation and describe their effects on temperature change using latent and sensible heat transfer.
3. Safely demonstrate the refrigeration process using system components such as compressors, condensers, evaporators, metering (expansion) devices and accessories.
4. Demonstrate a knowledge of industry standards for system installation of equipment and tubing and safely demonstrate tubing operations including cutting, reaming, flaring, swaging, and brazing."

HVAC 1110

Introduction to Fundamentals of Electricity

Course Description

Introduces the student to electrical theory, generation and distribution, OHM's Law, series and parallel circuits, A/C / D/C, practical applications and electrical safety.

Student Learning Outcomes

1. Demonstrate the use of industry practices: safety, use of lockout/tagout, diagnosing , repairing, and installing electrical components in HVAC/R equipment and systems
2. Use of test instruments both digital and analog

3. Comprehension of wiring diagrams, proper use of tools specific to the industry
4. Mastery of electrical theory and circuits, single-phase and three-phase applications
5. Use of symbols and terminology; and the ability to communicate professionally in oral and written forms.

HVAC 1115

Refrigeration Management

Course Description

This course will stress the accepted practices and proper procedures to handle refrigerate materials. The course will educate the student in the proper procedures for safely conducting leak detection, evacuation, recovery and charging systems. Students will prepare for and take the Universal CFC Refrigerant Handlers Certification exam, which is required by the EPA. This certification is required to handle and service all types of refrigeration equipment containing and using refrigerants. Students must pass the exam with a 71% and be able to successfully perform evacuation, recovery, and charging of systems for Type 1, Type 2 and Type 3 procedures.

Student Learning Outcomes

1. Demonstrate knowledge of accepted practices and procedures of refrigerant handling used in the air conditioning and refrigeration industry.
2. Properly and safely service refrigeration equipment used for comfort air conditioning and refrigeration preservation processes.
3. Maintain refrigeration systems including leak and pressure testing, evacuation, and system recharging.
4. Be able to explain the application of relief devices on pressurizes fluids.
5. Be able to successfully identify equipment.

HVAC 1120

Motors & Controls

Course Description

Covers primary and control circuits in various applications, troubleshooting and components. Emphasizes attention to motors and starting devices.

Student Learning Outcomes

1. Demonstrate industry safety practices.

2. Use electrical meters appropriately to test and identify voltages in both single- and three-phase systems.
3. Size and test fuses/breakers and safely replace them.
4. Define or explain the use or function of contactor/starters.
5. Demonstrate proper use of test equipment for testing contactor/starters and motors.
6. Measure compressor windings and operating amps and determine if they are correct.
7. Demonstrate proper use of a megohmmeter and check winding insulation.
8. Use a continuity tester to determine whether an open circuit or dead short exists.
9. Define and explain the use or function of capacitors; calculate capacitance.
10. Use a capacitance meter to measure run and start capacitors.
11. Determine the electrical characteristics of both series and parallel circuits.
12. Explain electric motor theory (i.e., magnetism, electromotive force, etc.)
13. Explain operation and application of capacitor start induction run motor (CSIR), capacitor start capacitor run motor (CSCR), permanent split capacitor (PSC), and shaded pole.
14. Describe starting components associated with single-phase motors.
15. Explain the significance of power factor.
16. Determine physical conditions of motor bearings and rotors.
17. Draw and explain the starting and run circuit for a single-phase CSIR compressor using a current type-starting relay, the starting and run circuit for a single-phase CSCR compressor using a potential starting relay, and draw and explain the circuit for a PSC compressor.
18. dentify the fundamentals types of electric motors, listing basic characteristics.
19. Describe the basic application where these motors are used in the industry.
20. Be able to wire and troubleshoot the motors starting devices used in the industry.
21. Apply principles of fundamental motor diagrams as they relate to motor controls and overload protection.
22. Demonstrate procedures used for troubleshooting motors and control components.
23. Apply principles of electricity using rating, and current to describe service factors.
24. Define capacitance and identify it's use as it relates to motors.

HVAC 1235

AC AND CONTROLS

Course Description

Covers installation, service and maintenance of air conditioning and heat pump systems.

Student Learning Outcomes

1. Interprets model numbers and nomenclature so as to ascertain application and capacity of any listed component or system.

2. Evaluate system performance based on information obtained from readings and manufacturer's performance charts, using gauges, electrical test equipment and thermometers above listed systems for proper operation, and make repairs as needed.

3. Describe the steps necessary to:
   -assemble, pipe together, pressure-up, leak check, evacuate, charge, and operate any listed system,
   -recover, recycle, and reclaim refrigerant, services in layman terms,
   -connect wiring, check, integrity of electrical components, and gather electrical data for any listed system,
   -ohm out motor, and
   the ""hopscotch"" method of troubleshooting.

4. Utilize schematics and wiring charts in order to determine operating characteristics and ampacity of listed systems.

5. Demonstrates the proper and safe use of tools and instruments such as clamp on amp meter, Digital Multimeter, Capacitor Checker, recording and electronic thermometers,
   trouble shoot electrical problems using the ""hopscotch"" method, removing and replacing any component on the above listed systems.

6. Use a schematic and electrical test instruments to trouble shoot and repair labs systems such as A/C Heat Pump, Roof Top combo and Split system.

Addendum B - II

NORTHERN NEW MEXICO COLLEGE

Program-Level
Student Learning Outcomes

Program of Study: Heating, Ventilation and Air Conditioning (HVAC)Technology

Degree/Credential: Certificate

Program Assessment Coordinator: Joseph Padilla
Assessment Contributor: Dr. Frank Loera

Student Learning Outcomes

1. Students demonstrate personal wellness as an HVAC Technician through outlining and identifying person/work priorities. **Safety and Craftsmanship**
2. Students will be able to demonstrate logical reasoning in the HVAC trade through identifying best material selection, identifying adequate current processes, and discussing HVAC concepts by industry name, identifying materials by industry standard terms, and explaining processes using industry appropriate terms. **Industry Proficiency**
3. Students will demonstrate HVAC technology through using current HVAC tools, interpreting construction drawings, and demonstrating code compliance. **Trade Standards**
4. Students will be able to implement HVAC projects in a group by expressing ideas, accepting others' ideas, and demonstrating taking personal responsibility for their own portion of the project. **Team Work**
5. Students will be able to interact with people in a professional manner in the construction industry by identifying diversity in skill sets and demonstrating mutual respect for others. **Communication and Cooperation**
6. Students will apply employability skills in the HVAC trade by demonstrating a willingness to work and conducting themselves in an industry leading manner. **Work Ethics/Professionalism**

Addendum B - II

Assessment Plan

Student Learning Outcomes

- Each of the 6 student learning outcomes has a course identified where it will be measured during the two-year cycle.
- Every outcome has a full-time faculty member identified and responsible for the measurement and the report.

- Monthly departmental meetings will provide time for discussion and updates on assessment and measurement instruments.

Data Sampling

- Data will be collected only from students enrolled in the class for credit.
- Since current classes are typically less than 20 students, there is no sampling for assessment. This will be revisited if the size of the classes increases.
- Dropouts are not considered to evaluate the achievement of the outcome if the measurement is taken after the drop.

Definitions of Performance

- Assessment instruments will be peer-reviewed before using them.
- Data will be presented in histograms/table.

Level of Attainment of outcomes per student:

- Target Met: a student achieves a 70% of the instrument scale.
- Target Not Met: a student does not achieve a 70% of the instrument scale.

Level of Attainment of outcomes per class:

- Target met: 75% of all students achieved their target.

- Target in progress: less than 75% of all students achieve their target.

Level of Attainment of outcomes for the Program:

- For 100-level and 200-level classes, the department assigns 1 point if the level of attainment is marked as "Target in progress".
- For 100-level and 200-level classes, the department assigns 2 points if the level of attainment is marked as "Target met".

Addendum B - II

The level of attainment of a student outcome considering all courses where the student outcome is measured, is defined as:

$$Level\ of\ attainment\ of\ outcome = \frac{Points\ achieved}{Maximum\ points\ in\ outcome}$$

Program outcomes are measured annually. Data is collected, aggregated, and analyzed. Areas for program improvement are identified and actions are implemented. Assessment Data results are documented on the Program Assessment Report.

PSLO Assessment Schedule Spring 2025 - Fall 2026

Spring 2025
Introduction to Fundamentals of Refrigeration: Outcome 1
Introduction to Fundamentals of Electricity: Outcome 3

Fall 2025
Refrigeration Management: Outcomes 5

Spring 2026
Motors & Controls: Outcome 6

Fall 2026
AC and Controls: Outcomes 2,4

CURRICULUM MAP

Technical Mandatory Courses	1	2	3	4	5	6
Introduction to Fundamentals of Refrigeration	A					
Introduction to Fundamentals of Electricity			A			
Refrigeration Management					A	
Motors & Controls						A
AC and Controls		A		A		

APPENDIX C

HVAC Program Budget Estimates

	Year 1	Year 2	Year 3	Year 4
Instructor Salary x 1	$60,000	$61,800	$63,654	$65,564
Benefits	$21,000	$21,630	$22,247	$22,947
Salary Total	$81,000	$83,430	$85,901	$88,511
Supplies	$25,000	$15,000	$10,000	$10,000

Assumptions:

1. Most equipment is available, hand tools and supplies required year 1
2. Lab upgrades required year 1 so supplies & equipment are higher year 1
3. Year two continual small tool and supply build up
4. Year 3, 4, and 5 levels out with repaeated supplies for coursework/labs
5. Instructor salary increased 3 percent yearly for COL increases
6. Benefits estimated at 35%
7. One FTE required, Dual credit instructors will be from secondary schools
8. HED workforce funding for non creditstudent tuition for three years.
9. Trade Grants and contracts for training to aid in budget sustainment.
10. TRES/NNMCC currently applying for Trade Grant to fund Instructor for two years

Carpenter Program Student Enrollment Estimates

	Year 1	Year 2	Year 3	Year 4	Year 5
Dual Credit	10	15	20	25	30
Traditional	20	25	30	35	40

Carpenter Program Student Tution Estimates

	Year 1	Year 2	Year 3	Year 4	Year 5
Tuition Revenue $110 per credit at 30 credits per year	$33,000	$41,250	$49,500	$57,750	$66,000

Assumptions:

1. Tuition is based on Traditional Student enrollment only
2. Traditional student averaging 12 credits per semester
3. Program is suplemented financially by Branch Community College Mill Levy
4. Plumbers/Pipefitters Union supported Mill Levy andhas an MOU with NNMC to develop such programs
5. The Apprenticeship Pathway and Employment will stimulate enrollment
6. Enrollment estimates are conservative as dual credit students will start matriculating

U.S. BUREAU OF LABOR STATISTICS

OCCUPATIONAL OUTLOOK HANDBOOK

Heating, Air Conditioning, and Refrigeration Mechanics and Installer

Summary

Quick Facts: Heating, Air Conditioning, and Refrigeration Mechanics and Installers	
2023 Median Pay	$57,300 per year $27.55 per hour
Typical Entry-Level Education	Postsecondary nondegree award
Work Experience in a Related Occupation	None
On-the-job Training	Long-term on-the-job training
Number of Jobs, 2022	415,800
Job Outlook, 2022-32	6% (Faster than average)
Employment Change, 2022-32	23,000

What Heating, Air Conditioning, and Refrigeration Mechanics and Installers Do

Heating, air conditioning, and refrigeration mechanics and installers work on heating, ventilation, cooling, and refrigeration systems.

Work Environment

These workers install and repair systems in homes, schools, hospitals, and other buildings. They may need to work in cr temperatures. Most work full time, and schedules may vary.

How to Become a Heating, Air Conditioning, or Refrigeration Mechanic and Installer

Heating, air conditioning, and refrigeration mechanics and installers typically need a postsecondary nondegree award, a less education. Once hired, they typically have a lengthy period of on-the-job training to attain competency. These work

Pay

The median annual wage for heating, air conditioning, and refrigeration mechanics and installers was $57,300 in May 2(

Job Outlook

Employment of heating, air conditioning, and refrigeration mechanics and installers is projected to grow 6 percent from all occupations.

About 37,700 openings for heating, air conditioning, and refrigeration mechanics and installers are projected each year,

New Mexico Department of WORKFORCE SOLUTIONS

New Mexico's Occupational Outlook

New Mexico's Best Job Options

New Mexico's *Fastest* Growing Occupations

Wind Turbine Service Technicians	**108.3%**
Solar Photovoltaic Installers	**71.1%**
Information Security Analysts	**43.1%**
Home Health & Personal Care Aides	**35.8%**
Computer & Information Research Scientists	**28.6%**
Nurse Practitioners	**27.5%**
Speech-Language Pathologists	**26.7%**
Phlebotomists	**26.6%**
Physician Assistants	**26.3%**
Interpreters & Translators	**24.2%**
Physical Therapist Assistants	**23.8%**
Health Specialties Teachers, Postsecondary	**23.7%**
Operations Research Analysts	**22.3%**
Respiratory Therapists	**21.3%**
Cooks, Restaurant	**21.2%**
Diagnostic Medical Sonographers	**21.2%**
Market Research Analysts & Marketing Specialists	**20.5%**
Veterinary Technologists & Technicians	**20.4%**
Veterinary Assistants & Lab Animal Caretakers	**20.2%**
Physical Therapist Aides	**20.1%**

Occupations with the Most Annual Job Openings

6,630	Home Health & Personal Care Aides
5,570	Fast Food & Counter Workers
4,110	Cashiers
3,820	Retail Salespersons
3,440	Waiters & Waitresses
2,790	Secretaries & Admin. Assistants
2,710	Customer Service Representatives
1,760	Janitors & Cleaners
1,690	Construction Laborers
1,680	Cooks, Restaurant
1,510	Heavy & Tractor-Trailer Truck Drivers
1,440	Stockers & Order Fillers
1,380	General & Operations Managers
1,350	Laborers & Freight, Stock, & Material Movers
1,280	Supervisors of Food Prep. & Serving Workers
1,240	Registered Nurses
1,200	Supervisors of Retail Sales Workers
1,070	Maids and Housekeeping Cleaners
1,020	Supervisors of Office & Admin. Support
940	Maintenance and Repair Workers, General

Highest Paying Occupations

By Typical Minimum Required Education

Doctoral or Professional Degree

	Annual Openings	Annual Average Wage
Physicists	190	$167,200
Dentists, General	30	$159,760
Family Medicine Physicians	30	$146,320
Health Specialties Teachers, Postsecondary	150	$141,390
Pharmacists	70	$128,680
Veterinarians	30	$91,700
Physical Therapists	90	$90,180
Lawyers	200	$87,690

Master's Degree

	Annual Openings	Annual Average Wage
Computer and Information Research Scientists	90	$129,630
Physician Assistants	70	$119,340
Nurse Practitioners	90	$111,720
Education Administrators, Postsecondary	60	$83,560
Occupational Therapists	40	$81,600
Education Administrators, Kindergarten–Secondary	130	$81,270
Speech-Language Pathologists	80	$71,760
Instructional Coordinators	50	$60,660

Bachelor's Degree

	Annual Openings	Annual Average Wage
Nuclear Engineers	60	$182,720
Architectural and Engineering Managers	130	$166,370
Physical Scientists, All Other	60	$122,290
Electrical Engineers	120	$116,110
Mechanical Engineers	100	$114,480
Electronics Engineers, Except Computer	60	$113,430
Information Security Analysts	110	$109,580
Medical and Health Services Managers	180	$106,320

Associate's Degree

	Annual Openings	Annual Average Wage
Air Traffic Controllers	30	$118,290
Electrical and Electronics Drafters	30	$81,420
Industrial Engineering Technicians	30	$80,150
Calibration & Engineering Technicians	210	$78,160
Dental Hygienists	80	$78,120
Diagnostic Medical Sonographers	50	$69,550
Electrical and Electronic Engineering Technologists and Technicians	120	$63,890
Nuclear Technicians	30	$61,840

Postsecondary Non-Degree Award or Some College, No Degree

	Annual Openings	Annual Average Wage
Supervisors of Firefighting & Prevention Workers	60	$57,340
Aircraft Mechanics and Service Technicians	40	$56,420
Electrical & Electronics Repairers, Commercial	30	$53,350
Wind Turbine Service Technicians	40	$49,240
Licensed Practical and Licensed Vocational Nurses	200	$48,560
Telecommunications Equipment Installers and Repairers, Except Line Installers	100	$47,520
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	150	$43,450
Surgical Technologists	60	$43,380

High School Diploma or Equivalent

	Annual Openings	Annual Average Wage
Real Estate Brokers	30	$102,620
Commercial Pilots	30	$86,680
Detectives and Criminal Investigators	90	$83,170
Supervisors of Police and Detectives	50	$81,510
Transportation, Storage & Distribution Managers	30	$78,040
Petroleum Pump System & Refinery Operators	90	$77,160
Wellhead Pumpers	50	$68,480
Gas Plant Operators	40	$67,660

No Formal Education Credential

	Annual Openings	Annual Average Wage
Continuous Mining Machine Operators	120	$72,220
Service Unit Operators, Oil and Gas	270	$64,470
Rotary Drill Operators, Oil and Gas	170	$52,300
Derrick Operators, Oil and Gas	210	$48,010
Industrial Truck and Tractor Operators	140	$39,350
Plasterers and Stucco Masons	60	$38,720
Drywall and Ceiling Tile Installers	70	$38,020
Cement Masons and Concrete Finishers	150	$37,660

*** Occupations with at least 30 projected annual job openings between 2018–28. Excludes "all other" occupation categories.**

New Mexico's STAR Occupations

The Best Job Opportunities in New Mexico

5-STAR OCCUPATIONS

	Annual Openings	Median Annual Wage	Required Education
Registered Nurses	1,240	$73,180	B
Electricians	610	$49,040	HS
Construction Equipment Operators	580	$43,300	HS
Management Analysts	380	$75,780	B
Plumbers, Pipefitters, and Steamfitters	370	$44,260	HS
Exercise Trainers/Fitness Instructors	310	$38,880	HS
Software Developers/Analysts	310	$87,880	B

4-STAR OCCUPATIONS

	Annual Openings	Median Annual Wage	Required Education
Heavy & Tractor-Trailer Truck Drivers	1,510	$41,860	SC
General & Operations Managers	1,380	$89,400	B
Supervisors/Construction & Extraction	880	$58,730	HS
Carpenters	650	$38,430	HS
Services Sales Representatives	550	$47,510	HS
Social & Human Service Assistants	450	$35,890	HS
Welders, Cutters, Solderers, Brazers	240	$49,440	HS
Financial Managers	230	$95,460	B
Construction Managers	220	$87,060	B
Derrick Operators, Oil & Gas	210	$48,010	NFEC
Food Service Managers	210	$57,200	HS
Licensed Practical & Vocational Nurses	200	$48,560	SC
Physicists	190	$167,200	DP
Medical & Health Services Managers	180	$106,320	B
Painters, Construction & Maintenance	180	$35,440	NFEC
Admin. Services & Facilities Managers	170	$88,600	B
Rotary Drill Operators, Oil & Gas	170	$52,300	NFEC
Computer Systems Analysts	160	$76,530	B
Supervisors/Landscapers	160	$47,550	HS
Cement Masons & Concrete Finishers	150	$37,660	NFEC
Environmental Scientists	150	$67,200	B
Health Teachers, Postsecondary	150	$141,390	DP
Heating, Air, Refrig. Mechanics	150	$43,450	SC
Network & Computer Systems Admin.	150	$72,840	B
Architectural & Engineering Managers	130	$166,370	B
Electrical Engineers	120	$116,110	B
Property & Real Estate Managers	120	$44,790	HS
Information Security Analysts	110	$109,580	B
Computer & Info. Systems Managers	100	$104,460	B
Earth Drillers and Blasters	30	$52,310	HS

3-STAR OCCUPATIONS

	Annual Openings	Median Annual Wage	Required Education
Construction Laborers	1,690	$31,980	NFEC
Accountants and Auditors	680	$59,620	B
Roustabouts, Oil and Gas	680	$34,810	NFEC
Dental Assistants	330	$36,380	SC
Training and Development Specialists	250	$54,480	B
Substance Abuse, Behavioral & Mental Health Counselors	240	$48,030	B
Computer User Support Specialists	220	$38,910	SC
Market Research Analysts & Marketing Specialists	210	$52,080	B
Educational, Guidance, and Career Counselors	180	$56,100	M
Paralegals and Legal Assistants	170	$46,650	A
Healthcare Social Workers	160	$56,030	M
Loan Interviewers and Clerks	150	$36,100	HS
Loan Officers	140	$52,900	B
Clinical Laboratory Technicians	120	$46,660	B
Cost Estimators	120	$57,410	B
Clinical, Counseling, and School Psychologists	110	$66,560	DP
Public Relations Specialists	110	$55,150	B
Librarians & Media Collections Specialists	70	$46,750	M

Typical Minimum Education Required

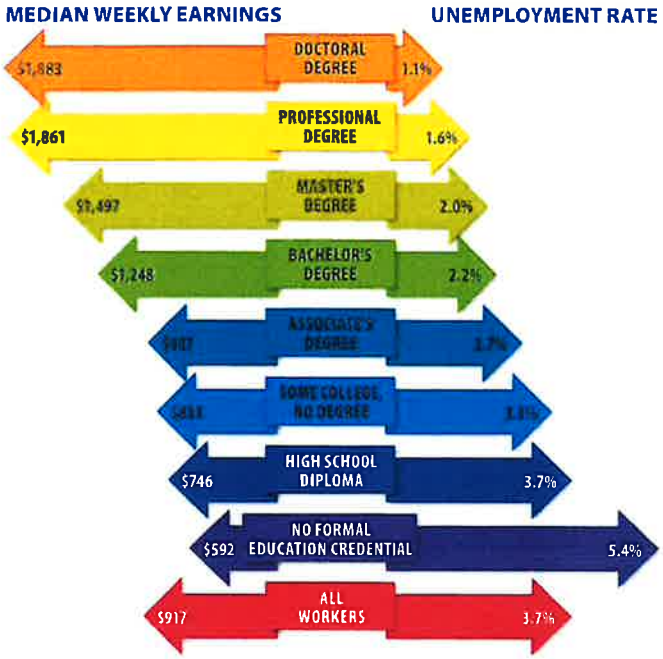
A: Associate's degree
B: Bachelor's degree
DP: Doctoral or professional degree
HS: High school diploma or equivalent
M: Master's degree
NEFC: No formal educational credential
SC: Some college, no degree

The higher the STAR number, the higher the projected growth and/or wage. For more information on STAR growth and wage criteria, visit www.dws.state.nm.us/Researchers/Data/Occupational-Outlook

Want more information on occupations, wages, and projected growth? Go to www.dws.state.nm.us/Researchers

Education Pays

Unemployment Rates & Weekly Earnings by Education Level



For persons 25 and older. Earnings are for full-time workers. U.S. data for 2019. Source: U.S. Bureau of Labor Statistics, Current Population Survey

Want to know more about occupations and wages?

Check out DATA DASHBOARDS!

Dashboards present data as interactive visualizations, like maps, charts, and graphics, designed to show you just what you need and want. See data for specific occupations, customize the data you see, and download your visualizations and data.

For more on occupations and wages, visit:
www.dws.state.nm.us/Occupations-Wages.

More dashboards are available at
www.dws.state.nm.us in the Researchers menu.

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Revised 08/2020

47.0201 HVAC Maintenance Tech ▼ Market: NNMC 100 ▼ Modality: All ▼ Award Level: Associates and Below ▼ Sele

47.0201 HVAC Maintenance Tech | Market: NNMC 100

Student Demand
Score: 17 Percentile: 99

Category	Pctl	Criterion	Value	Score
Size	93	Inquiry Volume (12 Months)	31	8
	0	Int'l Page Views (12 Months)	0	NS
	54	Google Search Volume (3 Months)*	433	0
	97	On-ground Completions at In-Market Institutions	52	NS
	0	Online Completions by In-Market Students	0	NS
	97	Sum of On-ground and Online Completions	52	6
Growth	99	Inquiry Volume YoY Change (Units)	22	2
	50	Google Search YoY Change (Units)*	16	0
	97	Completion Volume YoY Change (Units)	8	1
	90	Inquiry Volume YoY Change (%)	244%	0
	48	Google Search YoY Change (%)*	4%	0
	63	Completion Volume YoY Change (%)	18%	0

Competitive Intensity
Score: -3 Percentile: 1

Category	Pctl	Criterion	Value	Score
Volume of Competition	97	Campuses with Graduates**	2	-1
	83	National Online Institutions (Units)**	3	NS
	0	Institutions with Online In-Market Students**	0	NS
	98	Institutions YoY Change (Units)**	0	-1
	81	Average Completions by Local Institution	28	1
	75	Median Completions by Local Institution	17	0
	95	YoY Median Program Change (Units)	8	-1
	82	YoY Median Program Change (%)	1	-1
	50	Nat'l Online % of Institutions	0%	0
	48	Nat'l Online % of Completions	0%	0
Market Saturation	66	Average Cost per Inquiry**	$54	0
	51	Google Search * Cost per Click**	$4	0
	88	Google Competition Index**	0.60	0

Employment*
Score: 15 Percentile: 94

Category	Pctl	Criterion	Value	Score
Size (Direct Prep)	83	Job Postings Total (12 Months)*	18	4
	91	BLS Current Employment*	968	7
	90	BLS Annual Job Openings*	88	2
Size (Generalist)	32	BLS Share of Generalist Employment*	0	NS
	32	BLS Share of Generalist Openings*	0	NS
Growth (Direct Prep)	80	BLS 1-Year Historical Growth*	10%	1
	88	BLS 3-Year Historic Growth (CAGR)*	14%	1
	38	BLS 10-Year Future Growth (CAGR)*	0.2%	NS
Saturation (Direct Prep)	44	Job Postings per Graduate*	0.3	-2
	61	BLS Job Openings per Graduate*	2.0	0
Wages (Direct Prep)	29	BLS 10th-Percentile Wages*	$30,990	0
	21	BLS Mean Wages*	$44,623	NS
	69	Nat'l ACS Wages (Age < 30)	$46,097	0
	34	Nat'l ACS Wages (Age 30-60)	$78,605	0
National American Community Survey Bachelor's Degree Outcomes	4	Nat'l ACS % with Any Graduate Degree	13%	NS
	3	Nat'l ACS % with Masters	10%	NS
	16	Nat'l ACS % with Doct/Prof Degree	3%	NS
	3	Nat'l ACS % Unemp. (Age <30)**	1%	2
	94	Nat'l ACS % Unemp. (Age 30-60)**	3%	0
	54	Nat'l ACS % in Direct Prep Jobs	3%	NS

CIP Description:
A program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.

Percentile 0 20+ 40+ 70+ 90+ 95+ 98+ 100

** Color Scale in Reverse

NOTE: The website will have the most current version.

New_Acad_Signature Approval Form

Northern New Mexico College
New Degree Program
Signature Approval Form
Spring 2023

First Phase of Approvals Academic Departments Collects Signatures	
Office of the Provost / ✓ / Approval to Implement / / Denial **1st Review** / / Approval Pending Additional Planning	Sign Date 9/4/24
Justification	
External Advisory Committee Chair / ✓ / Yes / / No	Sign
Justification Local 412 Plumbers and Pipefitters	Date 9-11-24
Branch Community College Internal Faculty Committee Chair / X / Yes / / No	
Justification Technical Trades Department Chair	Date 9/16/24
Second Phase of Approvals Academic Department Collects Signatures	Sign
Office of the Provost / ✓ / Approval to Implement / / Denial **2nd Review** / / Approval Pending Additional Planning	Date 9/27/24
Justification	Sign
Librarian / (Yes) / / No	Date 10/02/24
Justification	
Assessment Office / / Yes / / No	Courtney Bruch
Justification	Date 10/14/24
Registrar / (Yes) / / No	Sign
Justification	Date 10/14/2024
Financial Aid / (Yes) / / No	Sign Sandra Adams
Justification	Date
Distance Ed Director / (Yes) / / No	Sign
Justification	Date
Facilities Director / (Yes) / / No	Sign
Justification	Date

Institutional Research / / Yes / / No	Sign Carmella Sanchez
Justification	Date 10/18/24
Human Resources / / Yes / / No	Sign Stephanie Salazar
Justification	Date 10/21/2024
VP for Finance and Administration / / Yes / / No	Sign T. [illegible]
Justification	Date 10/22/2024
Office of the Provost / / Approval to Implement / / Denial / / Approval Pending Additional Planning	Sign [illegible]
Justification	Date 10/22/24
FINAL APPROVALS **Provost Office Collects Signatures**	Sign
Office of the President / / Approval to Implement / / Denial / / Approval Pending Additional Planning	Date
Justification for approval or denial	Sign
Board of Regents / / Approval / / Denial / / Approval Pending Additional Planning	Date
Justification for approval or denial	
Mandatory Meeting: Initiator of the Program Proposal calls for a meeting with the Office of the Provost, HLC ALO, Registrar, Institutional Effectiveness, and Financial Aid	Sign
Feedback to Institution	Date
	Sign
	Date
	Date

Office of the Provost
NORTHERN New Mexico College

MEMORANDUM

To: Board of Regents - Northern New Mexico College

From: Dr. Larry Guerrero, Interim Provost, and VP for Academic Affairs

Date: November 21, 2024

Re: Approval of a Certificate in Technical Trades - Welding

Issue
Northern New Mexico Branch Community College wants to offer a Certificate in Technical Trades Welding by 2025.

Overview
The attached document discusses the needs and characteristics for this Certificate in this region. These programs were developed in an effort to address the human resource needs of this growing industry and continue to offer our students access to the emerging trends in carpentry. The certificate is an essential step for NNMC to respond to this demand.

The implementation costs of this program will be covered by Mill-Levy revenue. Moreover, students who graduate with this certificate will help NNMC acquire credit for these accomplishments in the NM funding formula.

This certificate has been vetted and recommended by the Faculty Senate, the Provost and the President.

Recommendation
I recommend that the Board of Regents approve the new Certificate in Technical Trades Welding.

Office of the Provost

NORTHERN New Mexico College

Branch Community College

Academic Program Policy

Purpose

To provide a consistent methodology for developing and implementing new academic programs, including certificates, associate degrees, and bachelor's degrees.

Policy

The Board of Regents approves all new academic programs offered by the Northern New Mexico College (NNMC). All new academic programs proposals must follow the procedure developed by the NNMC Administration (described in the **NNMCC New Academic Program Flow Chart**). Proposals will follow the template **NNMCC Academic Program Approval Form** in this policy. All Proposals shall comply at a minimum with the **Criteria for New Academic Program Approval** of this policy.

Procedures

New Academic Proposals are to be submitted on **New_Acad_Program_Form** and will follow the steps of the New Academic Program Approval Process Flow Chart in this policy. Upon completion of all the steps in the flowchart, the Board of Regents will make one of three recommendations regarding the Proposal:

1. Denial
2. Approval Pending Additional Planning
3. Approval

A partially completed proposal may be submitted to obtain an "Approval Pending Additional Planning" status to the Office of the Provost, which will determine the degree of the feasibility of offering a particular academic program. If the Office of the Provost approves "pending additional planning," then a complete proposal may be submitted to the rest of the process in the Flow Chart.

When all steps have been completed, the Office of the President will submit all Academic Program Proposals to the Board of Regents at their next regularly scheduled meeting for their first reading. When the Board of Regents has no significant concerns or suggested changes, the Office of the President will re-submit the Proposal to them at their next regularly scheduled meeting for final approval.

Denial will be recommended for proposals that do not meet the criteria for new program development or which are missing key data elements or contain concerns that may be addressed in a resubmission.

Approval Pending Additional Planning will be recommended for proposals that, while meeting other of the criteria, provide evidence that key programmatic components and/or resources are not in place to implement the program.

In order to receive implementation approval, relevant evidence must be presented to the Office of the Provost in a subsequent status report that the key programmatic components and/or resources are no longer missing. After such evidence has been provided, the Proposal may continue with the approval process

Approval will be recommended for proposals that meet all criteria for new program development. No further submissions will be required, and, subsequent to Board approval, institutions may offer the new program at a date no sooner than that stipulated in the Proposal.

Implementation A new academic program will be implemented after the Higher Education Department, the Higher Learning Commission, and the U.S. Department of Education have approved the program for implementation. Depending on the nature of the program, other agencies may need to support or approved the program before implementation. The program shall not be marketed in any form until all external approvals have been granted.

Criteria for New Academic Program Approval

1. The proposed program relates to the institutional mission statement as contained in the Strategic Plan.

2. The proposed program does not duplicate other NNMCC offerings or, otherwise, provides a convincing rationale for doing so.

3. There is evidence that planning for the proposed program has been a collaborative process involving academic units and offices of planning and budgeting at the institutional level, as well as external advisory committees, representatives of the community, surveys and/or other analysis which verifies the demand and support for said Proposal, etc.

4. The Proposal provides a reasonable timetable of events leading to the implementation of the proposed program.

5. The Proposal provides evidence that there is a need for more people to be educated in this program at this level.

6. The Proposal contains reasonable estimates of headcount and FTE students who will major in

the proposed program.

7. The Proposal provides an appropriate, sequenced, and described course of study.

8. For bachelor's programs, the total number of credit hours does not exceed 120;; otherwise, the Proposal provides a reasonable argument for an exception to the 120 credit hours maximum.

9. The program meets the General Education requirements in New Mexico, when applicable, and maximizes the number of courses that are included in the common course system in New Mexico.

10. The proposed program relates to specific institutional strengths such as programs of emphasis, other academic programs, and/or institutes and centers.

11. If there have been program reviews or accreditation visits in the discipline pertinent to the proposed program or in related disciplines, the Proposal cites recommendations that were made and provides evidence that progress has been made in implementing those recommendations.

12. The Proposal provides evidence that the institution has analyzed the feasibility of providing all or a portion of the proposed program through distance learning technologies via its own technological capabilities as well as through collaboration with otheruniversities.

13. The Proposal provides evidence of sustainability in terms of enrollment revenues versus the cost of the program. It also provides a complete and reasonable budget, reflecting the text of the Proposal. Costs for the program should reflect costs associated with similar programs at other HED institutions.

14. The Proposal provides evidence that the faculty, in aggregate, have the necessary experience and research activity to sustain the program.

15. The Proposal provides evidence that, if appropriate, there is a commitment to hiring additional faculty in later years, based on estimated enrollments.

16. The Proposal provides evidence that library resources are sufficient to initiate the program.

17. The Proposal provides evidence that classroom, teaching laboratory, research laboratory, office, and any other type of space that is necessary for the proposed program is sufficient to initiate the program.

18. The Proposal provides evidence that necessary and sufficient equipment to initiate the program is available.

19. The Proposal provides evidence that, if appropriate, fellowships and scholarships are sufficient to initiate the program.

20. The Proposal provides evidence that, if appropriate, clinical and internship sites have been arranged.

21. The Proposal provides a complete and reasonable budget, reflecting the text of the Proposal. Costs for the program should reflect costs associated with similar programs at other Higher Education institutions.

22. In the event that resources within the institution are redirected to support the new program, the Proposal indicates the source from which funds will be redirected and provides evidence that such redirection will not have a negative impact on other programs.

23. The Proposal provides evidence that community college articulation has been addressed and ensured, when applicable.

24. For disciplines where specialized accreditation is available, the Proposal indicates whether the institution will seek such accreditation for the proposed program. If the institution indicates that specialized program accreditation will not be sought, adequate justification is provided.

25. The Proposal provides evidence that the academic unit(s) associated with a new degree has been productive in teaching, service, scholarship, and research, where appropriate.

NOTE: The website will have the most current version.

New_Acad_Program_Form

Northern New Mexico College
New Degree Program Approval Form
Version Fall 2022

	Type in the designated areas. Please do not alter any element of the form.				
1	Initiator:	Joseph Padilla		Date: 9-18-2024	
2	Subject area:	Skilled Trades			
3	Academic division:	Technical Trades			
4	Proposed title for New Curriculum Program: **Welding (WELD)**				
5	To begin:2025	Semester:	Fall	Academic Year:	2025
6	Degree or certificate to be offered: **Welding Certificate**				
7	Provide the Program Catalog Description: **The Certificate in Welding Technology is designed for students aiming to obtain certification and seeking qualifications for entry-level roles in the Welding and Metal Fabrication fields.**				
8	Please provide a tentative timeline for program implementation (including a **Gantt Chart**)				
	NEED				
9	Describe and provide evidence that the program is needed by the local and regional community (including job availability data) and provide evidence that there is student demand for the program. Respond to what are opportunities, external to the College, that support the new program (e.g., employer data, demographics, numbers of prospective students, market trends for the field, etc.)? **The American Welding Society (AWS) reports that eh average welding jobs to be filled annually between 2024-2028 is 82,500. The U.S. Department of Labor growth rate is slower than average at 2% but also report that "Despite limited employment growth, about 45,800 openings for welders, cutters, solderers, and brazers are projected each year, on average, over the decade. Most of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire" https://www.bls.gov/ooh/production/welders-cutters-solderers-and-brazers.htm. Welding is embedded in various occupations such as Maintenance and Repair workers, Industrial Machinery Mechanics where New Mexico Northern Region in Demand Occupations report over a 20% growth rate. Additionally, Welding is the following pathway in the Plumbers and Pipefitters Apprenticeship program pathway.** **See Appendix D**.				
10	Provide evidence and explain how the degree/credential proposed (bachelor vs associate vs certificate) is the correct fit for the program proposed. Provide the complete degree sheet of the program in Appendix A (Part I). Additionally, provide the Curriculum Efficiency Analysis in Appendix A (Part II). **Choosing between obtaining a welding certificate and a welding degree depends on individual career goals, time commitment, and financial considerations. Here are several reasons why someone might opt for a welding certificate rather than a degree:** **Time Efficiency: Welding certificate programs are typically shorter in duration compared to degree programs. Certificates can often be completed in a few months, allowing individuals to enter the workforce more quickly.** **Cost-Effective: Certificate programs generally have lower tuition costs than degree programs. This makes them a more affordable option for those looking to start a career in welding without accruing significant student debt.**				

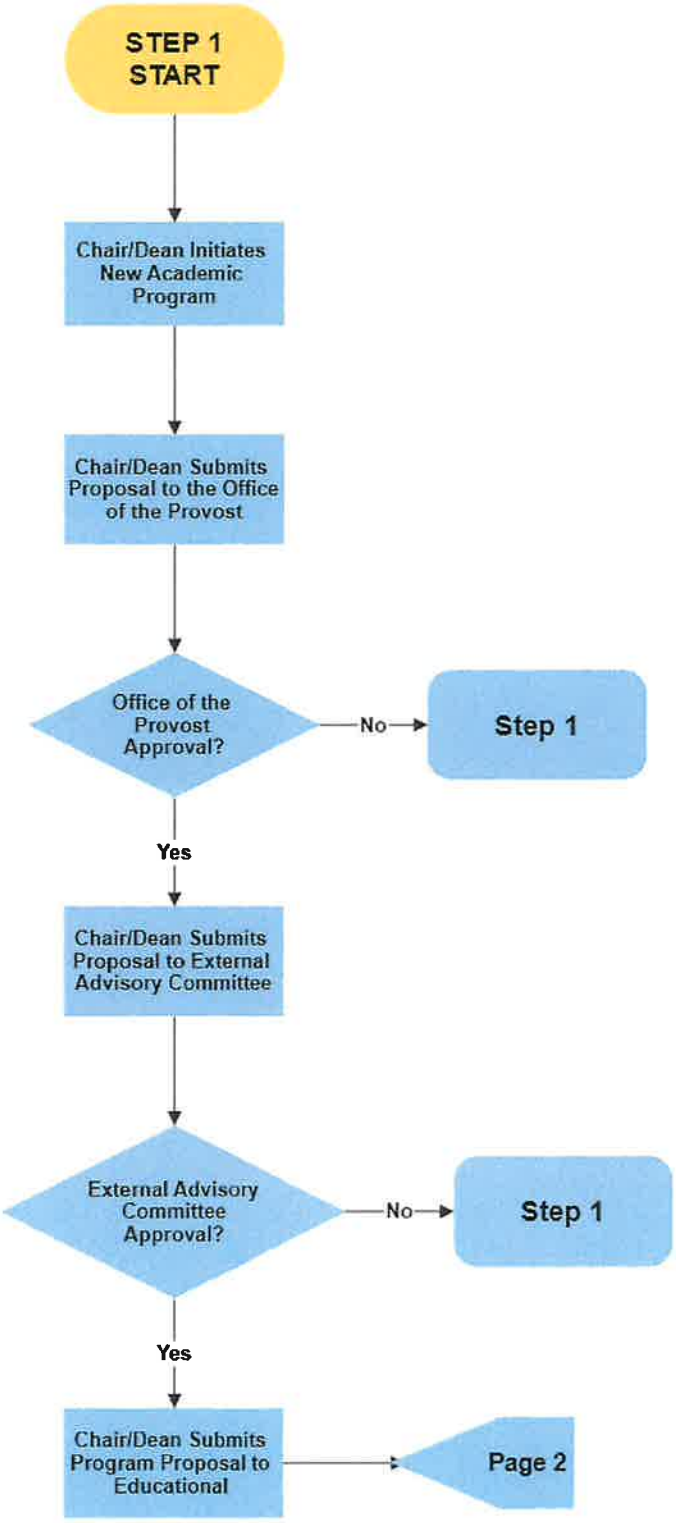
	Focused Training: Certificate programs often focus specifically on the skills and techniques needed for welding, providing hands-on training that can directly apply to job opportunities. This can be especially advantageous for those who want to gain specific skills quickly. **Industry Demand: The demand for skilled welders is high, and many employers prioritize practical skills and certifications over formal education. A welding certificate can demonstrate an individual's specific competencies and may be sufficient for entry-level positions in the industry.** **Entry-Level Employment: Many employers in the welding field may be more interested in practical experience and certifications than in having a degree. A certificate can help one secure an entry-level job, where they can gain the necessary experience to advance their career.** **Flexibility and Accessibility: Welding certificate programs are often offered at community colleges, vocational schools, and trade schools. This can make them more accessible to individuals who may not have the means or interest to pursue a longer degree program.** **Path to Advancement: For those already working in the field, obtaining a welding certificate might be a way to enhance skills or specialize in a particular area (e.g., welding for construction, manufacturing, or pipefitting) without committing to a degree program. This can lead to advancement opportunities or higher pay.** **Certification Options: Various certifications (such as AWS certifications) demonstrate specific competencies in welding processes and can enhance job prospects. These certifications can often be pursued alongside or after obtaining a welding certificate.**
11	What are the College's strengths that would support offering the program (e.g., trained staff, facilities, adequate budget, sustainability, etc.)? **NNMCC currently has trade pathways in Plumbing/Pipefitting and Electrical with Carpentry in the approval process. Welding technology fits in each of these building trades as an extension of a complete building trades Skilled Training agenda.** **Welding skills play a crucial and complementary role alongside other building trade skills such as electrical work, plumbing, and carpentry. Each trade has its specialized knowledge and techniques, but they often converge and overlap within construction and manufacturing projects. Here are some ways in which welding skills fit in with the other trades:** **Integration of Systems: Many construction projects involve the integration of various systems, such as structural supports that may require welding, as well as pipelines for plumbing and electrical conduits. The ability to weld and understand structural integrity enhances collaboration among trades.** **Structural Fabrication: In many cases, carpentry and welding go hand in hand when it comes to creating frameworks and supports. For instance, steel structures may need to be welded in place while carpenters might work on wood frameworks that complement the welded elements.** **Customization and Repair: Welding is often needed for custom projects and repairs in all trades. For example, custom metal brackets may be required for a carpentry solution, or metal fixtures may need repair in plumbing or electrical applications.** **Safety and Compliance: Understanding welding techniques is important for ensuring that all structural elements meet safety standards and building codes. Electricians and plumbers need to collaborate with welders to ensure that their installations do not interfere with welded structures and vice versa.** **Machine and Tool Fabrication: Many tools used in carpentry, plumbing, and electrical work require parts that can be welded together for strength and durability. Knowledge of welding allows tradespeople to modify tools or create custom fixtures.**

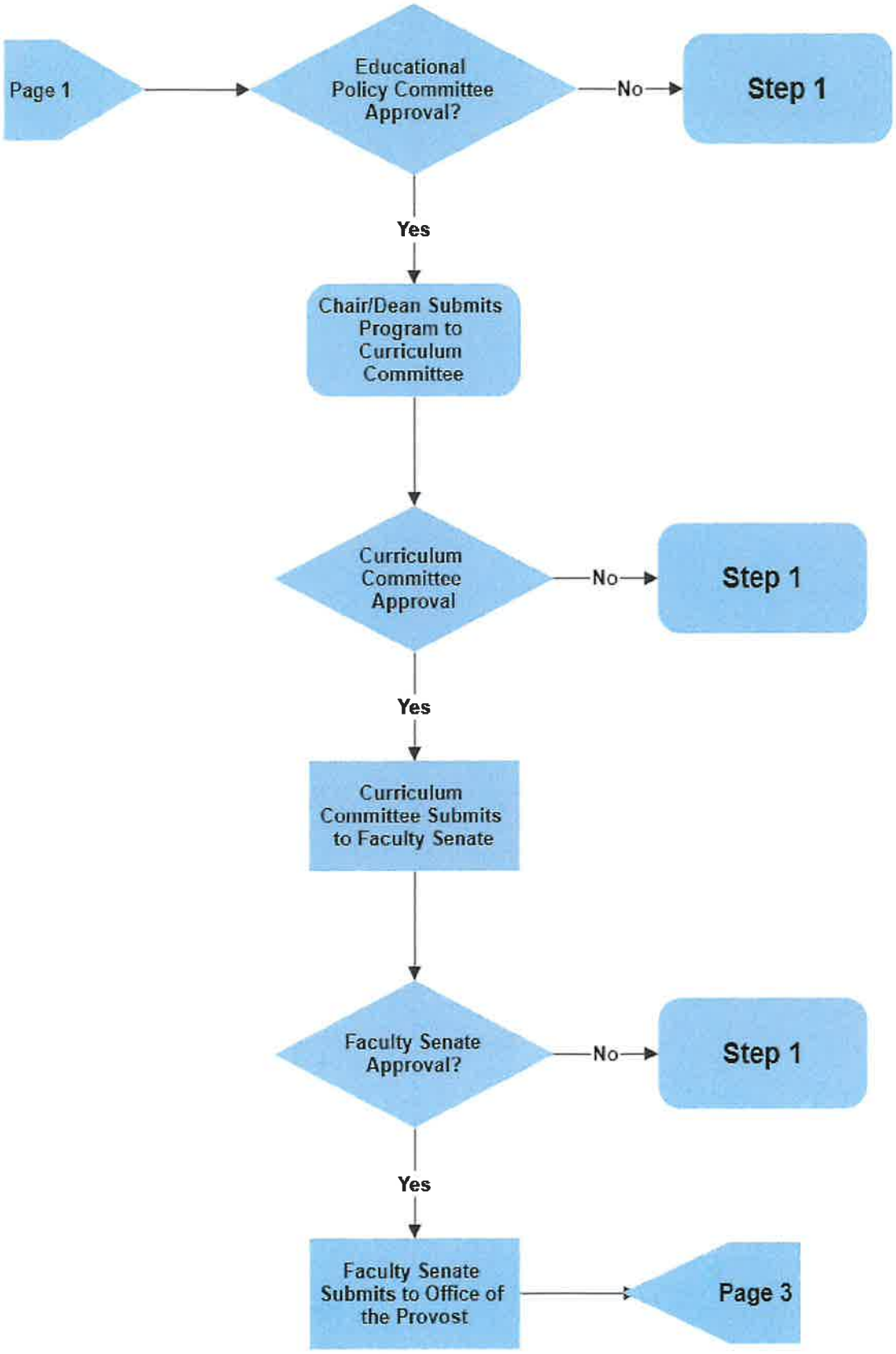
	Project Management: Professionals with welding skills may find themselves in project management roles where they oversee construction projects that involve multiple trades. Understanding how welding interacts with electrical, plumbing, and carpentry helps in planning and executing projects more effectively. **Career Opportunities: Individuals who possess welding skills alongside other trades can enhance their employability and versatility. For example, a carpenter who can weld might be more sought after for specific projects that require both skill sets.** **In summary, welding skills are integral to the successful execution of projects that involve various building trades. The ability to collaborate effectively across these disciplines can improve project outcomes, safety, and efficiency..**
12	What are the College's weaknesses that must be overcome to offer the program? **The college has only recently provided lab space at the Espanola campus and still has not provided classroom space for the Technical trades department. Space usage and facility support.**
14	What are the threats external to the College that would need to be dealt with (e.g., demographic shifts, new regulations, new infrastructure, etc.)? **Secondary Dual Credit programs insistent Faculty drive to their remote locations for instruction**
15	Describe how the program fits with College's mission, strategic goals, and strategic initiatives
	CURRICULUM
16	Program mission: **To provide comprehensive, high-quality Welding (WELD) training that equips students with the technical skills, industry knowledge, and practical experience necessary to excel in the Welding field. Our program aims to foster a deep understanding of Welding, enhance problem-solving abilities, and ensure students are prepared for certification and career advancement in a rapidly evolving industry.**
17	Provide the program objectives, provide the curricular degree sheet, and syllabi for all courses (syllabi are needed before it goes to the (BCC faculty Committee) **Curricular Degree Sheet and Syllabi Attached**
18	List the Program-level Student Learning Outcomes **Knowledge Acquisition:** Ensure students gain a thorough understanding of HVAC principles, systems, and components. **Practical Skills:** Develop hands-on skills through lab exercises and real-world simulations. **Certification Readiness**: Prepare students for HVAC certification exams with focused training and practice. **Career Preparation:** Equip students with the tools and knowledge necessary for a successful HVAC career, including resume writing and job interview techniques. **Industry Relevance:** Stay current with industry standards and technological advancements to provide up-to-date training. Also: **See Program Assessment Plan Appendix B part II**
19	Curriculum matrix (outcomes by courses in the major). Provide this as Appendix B (Part I) **See Appendix B part I**
20	Describe the coordination with other College programs: **Coordination with other college programs includes scheduling academic core content courses required of this program that does not conflict with core content scheduled courses. Additionally, coordination with other trade programs will be done to limit the space use of Laboratory facilities and needed lecture space. Where possible, use of learning equipment will be shared with other departments and courses that offer like core content will be considered for course substitutions on an individual basis.**

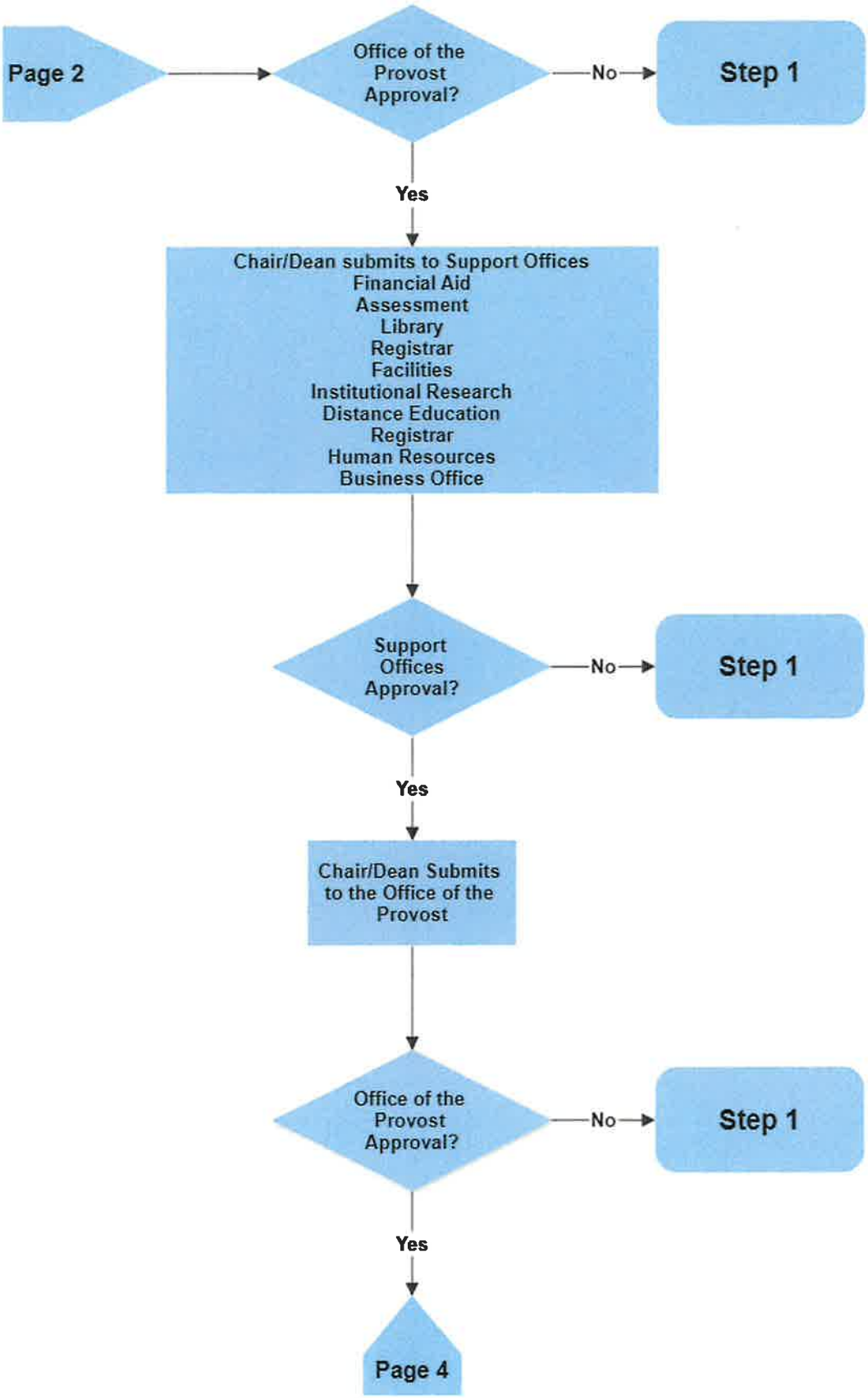
21	Explain the articulation agreements that the program will have with programs offered by other institutions: **The New Mexico Higher Education Department is currently adopting a common course identifier program in Trade courses. This pathway has been completed. Courses identified in this pathway have the same course description and learning outcomes of these trade courses in all post-secondary institutions in New Mexico for transferability purposes. Additionally, this content is Part of the pathway of a UA 412 Plumber/Pipefitter Apprentice after completion of the first three years of training. NNMCC offers trade courses to this union.**
22	What plans is the plan for the delivery of courses modalities (e.g., distance education, face to face, hybrid, others)? Please provide an analysis of the competition that the program will have based on the selected delivery modality. **Trade courses are more successful face to face with direct, hands on learning. Online modalities will be utilized only for theoretical lectures and descriptive examples. Hybrid modalities will be used for student cohorts that have distance gaps for attendance. Laboratory lessons will occur face to face with lessons leading, describing and explaining a hands-on function with practical experience on welding equipment.**
23	Describe the standards and practices that will be implemented for Prior Learning Assessment (PLA) within this program. **See Credit for Prior Learning Addendum attached** and at: https://nnmc.edu/wpcontent/uploads/2023/09/Credit_for_Prior_Learning_Guidelines_9.23.pdf
24	Describe the membership of the External Advisory Committee and the role that they have played in the development of Curriculum and Program-Level Student Learning Outcomes. **An External Advisory Committee includes the Southwest Plumbing and Pipefitting JATC that have reviewed with the Chair of Trades to the curriculum and instructional pathway that will meet the needs of industry and have pledged to continue serve as an external program review committee. A Second External Committee is the Workforce Integration network (WIN)**
25	Please indicate if this program falls within the umbrella of another program currently offered (for example, if the new program is an associate degree that consists of a subset of courses already offered by one or more bachelor programs, or whether the program is the result of a combination of courses already offered by the institution through other programs). Please indicate if a new CIP code is needed or already exists under the CIP codes approved for NNMC. **This program will reside in the Plumbing AAS degree program but will require a separate CIP number of: 48.0508- Welding Technology/Welder/ Manufacturing**
	ASSESSMENT
26	Plan for program assessment and evaluation of program-level student learning outcomes. Provide this section in Appendix B (Part II) See **Appendix B (Part II)**
	SUPPORT AND SUSTAINABILITY
27	Describe the faculty will serve in this program and their credentials. Please describe if new faculty is needed. If no new faculty members are needed, please describe how the current faculty will serve this program and what will be the impact in the current areas that those faculty members are serving **One faculty member will be required for this program.**
28	Describe precisely facility needs including, but not limited to identifying the office space for full-time faculty, adjunct faculty, administrative assistants. Identify the classrooms, labs, and instrumentation that this program will be required **The program has two locations identified to operate. The El Rito campus. The CTE Building being restored exists with plumbing/pipefitting and welding equipment, there are donated pieces of equipment. This shop serves the dual credit programs of NNMCC High School Dual Credit partners.** **The Espanola campus can serve the Espanola Valley High School dual credit trade program and adults form surrounding communities. The shop here has been undergoing clean up and modifications and is now ready to accept equipment for this proposed Welding program Office space availability exists at either campus**

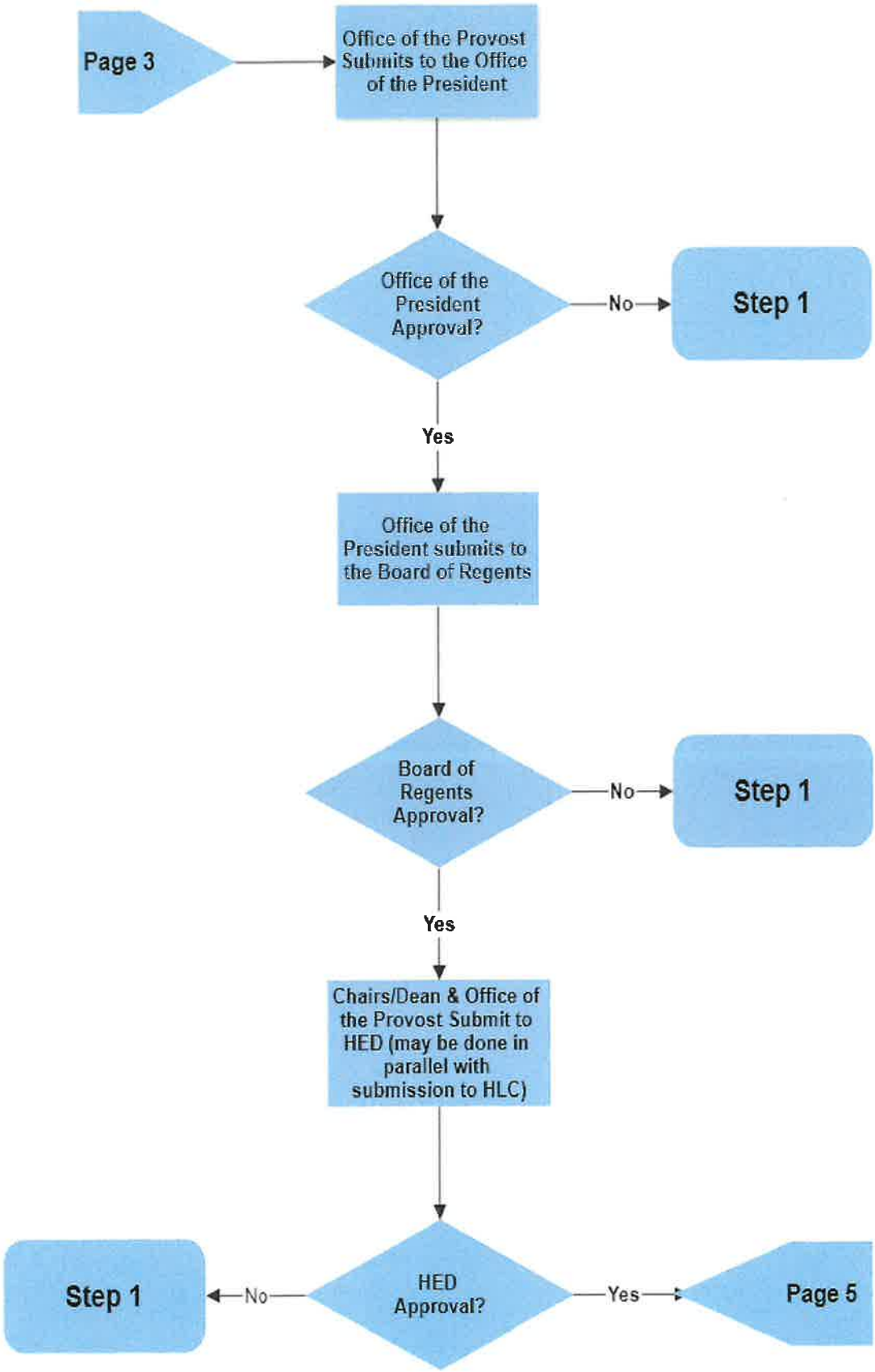
29	Describe the annual budget for this program for the first five years, the projected enrollment per year (including new headcounts part-time, full-time, graduates, dropouts), and the projected revenue. Include spreadsheets and explain clearly the assumptions. Please provide this section in **Appendix C.**
30	Describe the plans for sustainability (including a five-year enrollment projection with revenue and cost projections) **Appendix C**
31	Describe the strategic enrollment plan for the program and how it is aligned with the college strategic enrollment plan **The Department will coordinate with the NNMC Communication and Marketing department to relay the opportunities of this program regionally through a media marketing campaign. The effort will also include the support and endorsement of the Southwest Plumbing and Pipefitter JATC and the New Mexico Northern Regional Development Corporation. These organizations have multiple employers for placement of students once trained in this pathway. The pathway to a career in welding will be highlighted. The pathway will be introduced to the secondary school districts and offered as dual credit to build future enrollment capacity.**
32	Explain what external agencies (other than the Higher Education Department, the Higher Learning Commission, the U.S. Department of Education) need to approve (or must be notified) before the implementation of the program **N/A**

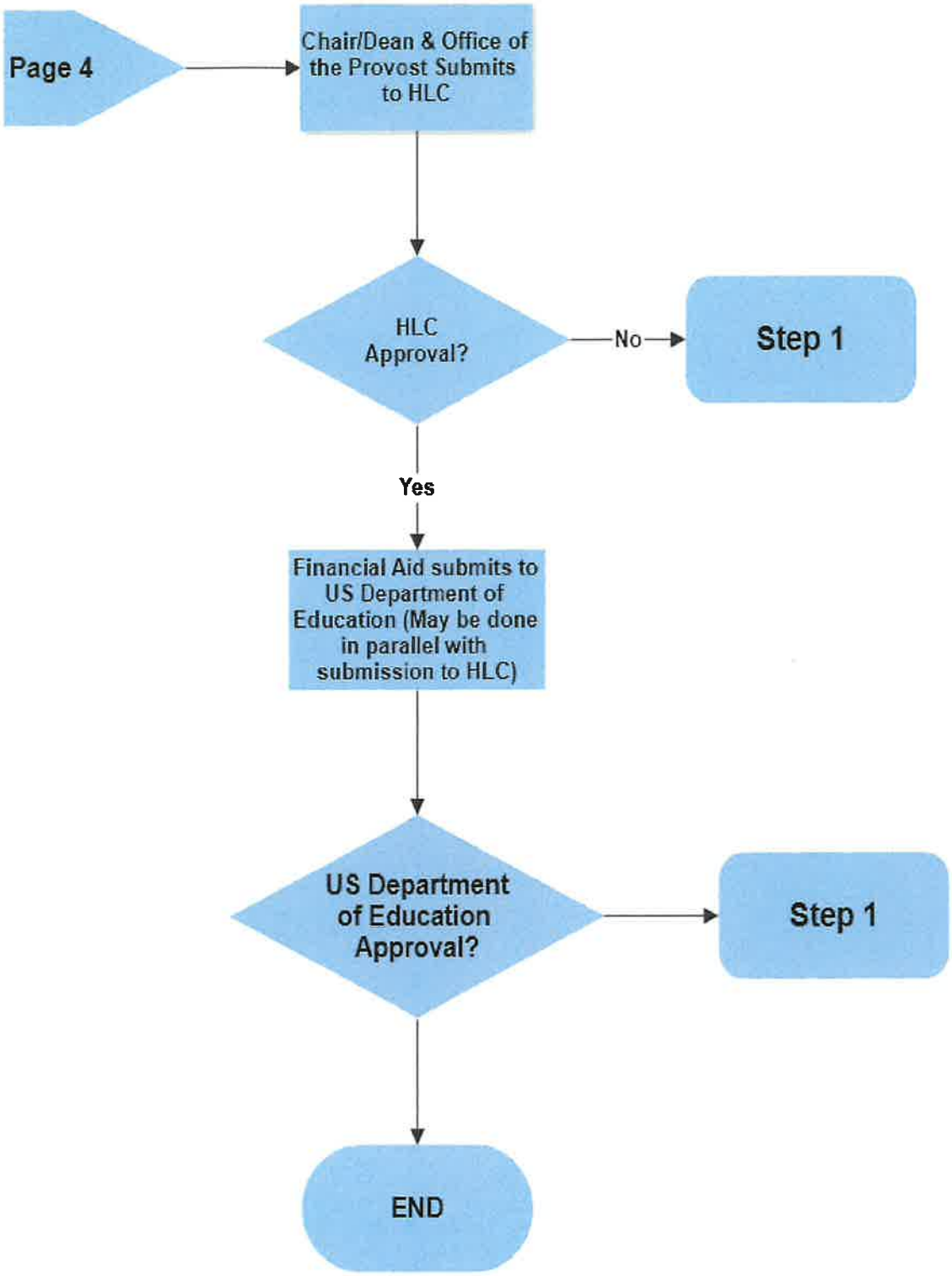
Northern New Mexico College
Branch Community College Academic Program Approval Process – Version Fall 2023




Page 1
Educational Policy Committee Approval?
No
Step 1
Yes
Chair/Dean Submits Program to Curriculum Committee
Curriculum Committee Approval
No
Step 1
Yes
Curriculum Committee Submits to Faculty Senate
Faculty Senate Approval?
No
Step 1
Yes
Faculty Senate Submits to Office of the Provost
Page 3


Page 2
Office of the Provost Approval?
No
Step 1
Yes
Chair/Dean submits to Support Offices
Financial Aid
Assessment
Library
Registrar
Facilities
Institutional Research
Distance Education
Registrar
Human Resources
Business Office
Support Offices Approval?
No
Step 1
Yes
Chair/Dean Submits to the Office of the Provost
Office of the Provost Approval?
No
Step 1
Yes
Page 4

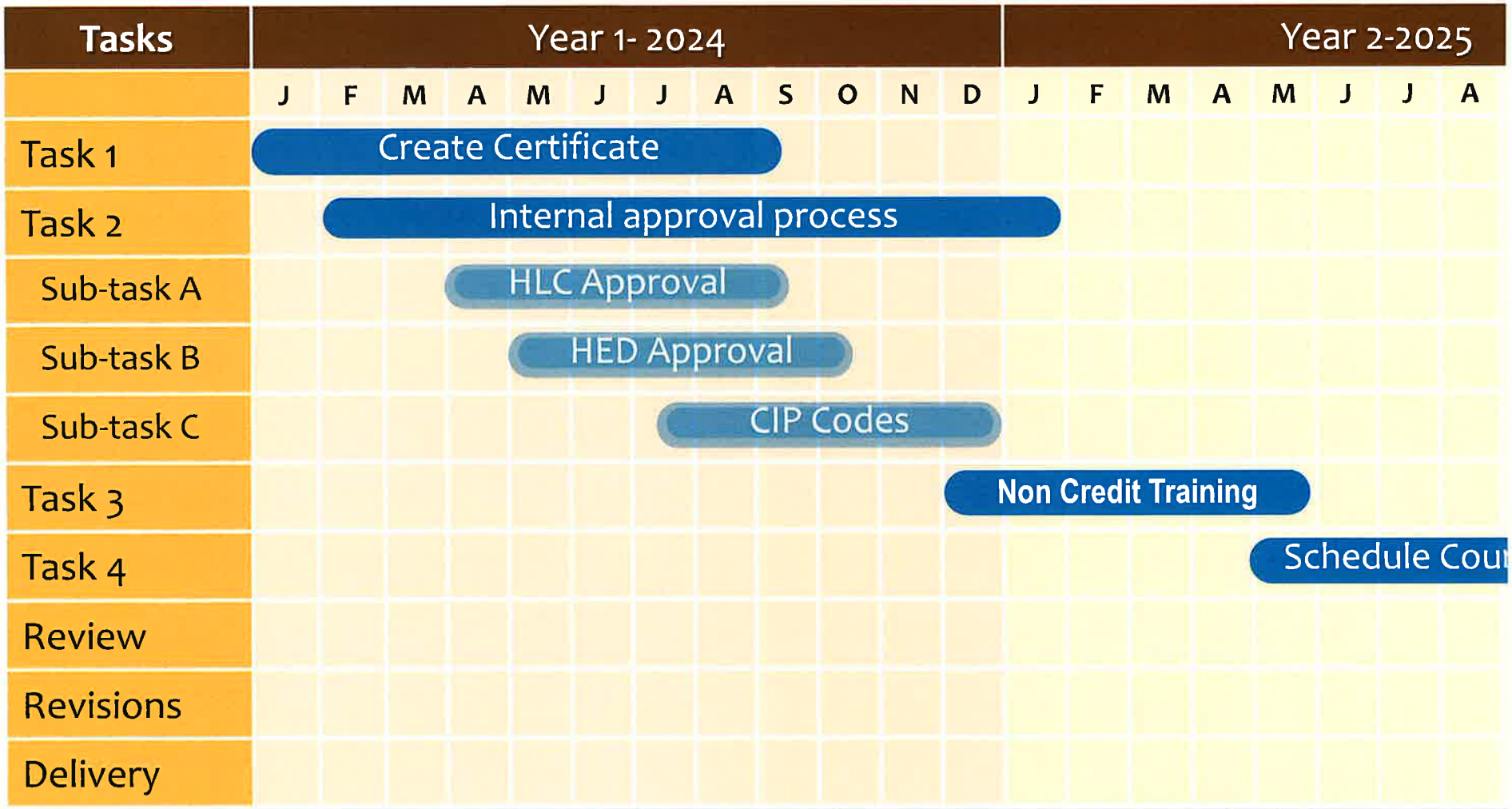

Page 3
Office of the Provost Submits to the Office of the President
Office of the President Approval?
No
Step 1
Yes
Office of the President submits to the Board of Regents
Board of Regents Approval?
No
Step 1
Yes
Chairs/Dean & Office of the Provost Submit to HED (may be done in parallel with submission to HLC)
HED Approval?
No
Step 1
Yes
Page 5



Approved by the Board of Regents on 11/17/2005
Amended by NNMC President on 10/25/2021

WELDING Certificate Implementati

TIMELINE-gannt chart



APPENDIX D

Data Spotlight: Projected Openings in Manufacturing

Filed in Data and Technology, Career Information, Employment Trends • **By: Dustin Riles** • October 5, 2023

On the first Friday of October, we celebrate Manufacturing Day. Manufacturing was responsible for about 15% of the US economy's output in 2022.

For those interested in a manufacturing career, there's good news: From 2022 to 2032, the Bureau of Labor Statistics projects thousands of openings each year, despite limited employment growth, in occupations that are employed primarily in manufacturing:

Note: BLS projections of openings are for occupations as a whole, not in specific industries. Openings arise from employment growth or from the need to replace workers who retire, change occupations, or leave for other reasons.Here's a closer look at these occupations.

Assemblers and fabricators build products and the parts that go into them.**Metal and plastic machine workers** set up and operate equipment that cuts, shapes, and forms metal and plastic materials or pieces. **Welders, cutters, solderers, and brazers** use a variety of equipment to join, repair, or cut metal parts and products. **Machinists and tool and die makers** set up and operate equipment to produce precision metal parts, instruments and tools.

Job Outlook Employment of welders, cutters, solderers, and brazers is projected to grow 2 percent from 2023 to 2033, slower than the average for all occupations. Despite limited employment growth, about 45,800 openings for welders, cutters, solderers, and brazers are projected each year, on average, over the decade.

Welders, Cutters, Solderers, and Brazers
Bureau of Labor Statistics (.gov)

NORTHERN REGION IN-DEMAND OCCUPATIONS 20

Projected Average ANNUAL Job Openings

20 or more

This represents the projected number of job openings from both new jobs and existing jobs that become available.

AND

Projected

13

This represents how f with a higher pe

Occupation Code & Title		Jobs as of 2020	Projected Employment Growth	Projected Avg. Annual Job Openings	
All Occupations		**182,530**	**13.0%**	**23,620**	**$25**
Master's Degree or Higher					
19-2012 Physicists	STEM	***	16.8%	130	
15-1221 Computer and Information Research Scientists	STEM	***	30.0%	40	$96
29-1171 Nurse Practitioners		330	57.1%	40	$85
29-1123 Physical Therapists		310	20.8%	20	$73
25-1071 Health Specialties Teachers, Postsecondary		130	25.6%	20	$50
29-1071 Physician Assistants		180	32.0%	20	$95
25-9031 Instructional Coordinators		170	23.6%	20	$35
25-4022 Librarians and Media Collections Specialists		180	13.3%	20	$33
Bachelor's Degree					
11-1021 General and Operations Managers		3,510	15.0%	360	$47
29-1141 Registered Nurses		3,380	13.8%	230	$59
13-1111 Management Analysts		880	17.9%	100	$48
13-1071 Human Resources Specialists		670	19.4%	80	$36
11-9198 Personal Service & Entertainment & Recreation Managers		660	19.5%	70	$63
15-1256 Software Developers & Quality Assurance Analysts and Tester	STEM	610	24.3%	70	$67
25-3031 Substitute Teachers, Short-Term		530	13.3%	70	$22
11-9111 Medical and Health Services Managers		490	34.0%	60	$77
13-1151 Training and Development Specialists		500	13.8%	60	$36
21-1018 Substance Abuse, Behavioral Disorder, and Mental Health Counselors		520	20.0%	60	$34
11-9021 Construction Managers		540	13.4%	50	$62
15-1212 Information Security Analysts	STEM	***	42.6%	50	$91
11-3031 Financial Managers		550	19.9%	50	$71
11-3010 Administrative Services and Facilities Managers		520	16.4%	50	$56
19-5011 Occupational Health and Safety Specialists		***	14.8%	40	$62
13-1081 Logisticians		***	41.0%	40	$59
27-3031 Public Relations Specialists		310	25.5%	40	$37
13-1161 Market Research Analysts and Marketing Specialists		290	37.8%	40	$33
11-3021 Computer and Information Systems Managers	STEM	360	16.6%	30	$85
11-3121 Human Resources Managers		160	15.3%	20	$66
27-2012 Producers and Directors		100	97.0%	20	$42
27-1027 Set and Exhibit Designers		120	62.8%	20	$31
27-1024 Graphic Designers		180	14.0%	20	$29
27-2022 Coaches and Scouts		90	26.1%	20	$23
Associate's Degree					
29-2034 Radiologic Technologists		280	13.5%	30	$47
31-2021 Physical Therapist Assistants		150	31.4%	30	$35
19-4042 Environmental Science & Protection Techs	STEM	140	13.0%	20	$29
Postsecondary Nondegree Award or Some College, No Degree					
31-9092 Medical Assistants		1,280	21.1%	190	$28
15-1232 Computer User Support Specialists	STEM	690	15.9%	60	$34

NORTHERN REGION IN-DEMAND OCCUPATIONS 20

20 or more projected average annual job openings **AND** **13.0% or higher project**

Occupation Code & Title	Jobs as of 2020	Projected Employment Growth	Projected Avg. Annual Job Openings	
High School Diploma or Equivalent continued				
39-9032 Recreation Workers	340	28.3%	70	$22
43-6013 Medical Secretaries	440	13.9%	60	$27
37-1011 Supervisors of Housekeeping and Janitorial Workers	370	27.9%	60	$27
39-1098 Supervisors of Personal Service, Entertainment & Recreation	280	37.2%	50	$26
35-1011 Chefs and Head Cooks	170	48.6%	40	$24
25-3021 Self-Enrichment Education Teachers	240	39.0%	40	$27
11-9051 Food Service Managers	270	20.5%	40	$42
39-7010 Tour and Travel Guides	80	112.5%	30	$25
11-9081 Lodging Managers	160	49.0%	30	$46
33-1090 Miscellaneous Supervisors, Protective Service Workers	210	32.9%	30	$40
37-1012 Supervisors of Landscaping, Lawn Service & Groundskeeping	260	15.3%	30	$36
45-1011 Supervisors of Farming, Fishing, and Forestry Workers	180	29.0%	30	$24
31-9096 Veterinary Assistants and Laboratory Animal Caretakers	150	16.2%	30	$24
53-3052 Bus Drivers, Transit and Intercity	160	13.4%	20	$28
43-5061 Production, Planning, and Expediting Clerks	150	15.2%	20	$29
45-4011 Forest and Conservation Workers	***	62.9%	20	
43-3041 Gaming Cage Workers	70	91.4%	20	$23
No Formal Educational Credential				
35-3023 Fast Food and Counter Workers	4,170	18.2%	1,000	$21
35-3031 Waiters and Waitresses	2,530	27.3%	620	$21
35-2014 Cooks, Restaurant	2,000	56.5%	480	$23
37-2012 Maids and Housekeeping Cleaners	1,710	48.4%	360	$22
35-2021 Food Preparation Workers	1,600	13.4%	310	$22
37-3011 Landscaping and Groundskeeping Workers	1,600	18.8%	260	$25
35-9011 Dining Room and Cafeteria Attendants and Bartender Helpers	570	39.1%	140	$21
35-9031 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	430	31.7%	130	$22
35-9021 Dishwashers	490	26.4%	100	$22
39-3091 Amusement and Recreation Attendants	270	81.8%	100	$22
35-3011 Bartenders	380	50.3%	100	$21
45-2092 Farmworkers and Laborers, Crop, Nursery, and Greenhouse	410	13.8%	80	$22
47-5071 Roustabouts, Oil and Gas	420	26.0%	70	$30
51-6011 Laundry and Dry-Cleaning Workers	340	22.7%	60	$22
33-9092 Lifeguards, Ski Patrol & Other Rec Protective Service Workers	190	27.8%	60	$22
45-2093 Farmworkers, Farm, Ranch, and Aquacultural Animals	230	25.3%	50	$22
41-2012 Gaming Change Persons and Booth Cashiers	140	75.9%	40	$22
51-3011 Bakers	200	17.9%	30	$23
35-2015 Cooks, Short Order	***	29.0%	30	$22
35-3041 Food Servers, Nonrestaurant	130	21.7%	30	$21
27-2021 Athletes and Sports Competitors	50	100.0%	20	$49

All occupations shown are considered to be in demand, with those identified as in high demand marked. Sources: 2021 OEWS and 2020–
percentage growth have been rounded. *** means data are suppressed and cannot be released. Excludes miscellaneous and occupations cla
demand occupational listing, methodology, and definitions, go to https://www.dws.state.nm.us/en-us/Researchers/Data/Occupational-Outl
us at NMDWS.Economicresearch@dws.nm.gov or 505-259-4587.

STEM: Science, technology, engineering, and math occupations as defined by the U.S. BLS (https://www.bls.gov/oes/topics.htm#stem). **HD**:
than 90 percent of all occupations and greater percentage growth than 75 percent of all occupations

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Welders, Cutters, Solderers, and Brazers
Bureau of Labor Statistics (.gov)

APPENDIX A (part I)

DEGREE SHEET / 2024-2025 CATALOG		
Student name:		
Eagle ID:		
Eagle Email:		
Phone:		
Certificate of Technical Trades (Welding) The Certificate in Welding Technology is designed for students aiming to obtain certification and seeking qualifications for entry-level roles in the Welding and Metal Fabrication fields.		
PROGRAM REQUIREMENTS (24 Credits)		
WELD 1110 Introduction to Welding Fundamentals (3) *Pre-requisite: None*		
WELD 1120 Print Reading for Welders (3) *Pre-requisite: None*		
WELD 1130 SMAW I (Shielded Metal Arc Welding) (3) *Pre-requisite: WELD 1110 Introduction to Welding Fundamentals*		
WELD 1140 Gas Metal Arc Welding I (GMAW) (3) *Pre-requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*		
WELD 1155 GTAW I (Gas Tungsten Arc Welding) (3) *Pre-requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*		
WELD 1171 Layout and Fabrication (3) *Pre-requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*		
WELD 1125 Thermal Cutting (3) *Pre-requisite: WELD 1171 Layout and Fabrication*		
WELD 1220 Pipe Welding I (3) *Pre-requisite: WELD 1155 GTAW I (Gas Tungsten Arc Welding)*		
TOTAL CREDITS 24		
ADVISOR APPROVAL	**DATE**	

SUGGESTED SEQUENCE OF COURSES

FIRST SEMESTER (12 Credits)	**SECOND SEMESTER (12 Credits)**
WELD 1110 Introduction to Welding Fundamentals (3) WELD 1120 Print Reading for Welders (3) WELD 1130 SMAW I (Shielded Metal Arc Welding) (3) WELD 1140 Gas Metal Arc Welding I (GMAW) (3) ELTR 1147 Electrical System Fundamentals (3)	WELD 1155 GTAW I (Gas Tungsten Arc Welding) (3) WELD 1171 Layout and Fabrication (3) WELD 1125 Thermal Cutting (3) WELD 1220 Pipe Welding I (3)

NORTHERN NEW MEXICO COLLEGE

WELD 1110 SYLLABUS

Course Number Course Name	WELD 1110 Introduction to Welding Fundamentals
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	This course focuses on the fundamental techniques employed in the welding field. It is a laboratory approach to understanding and building skills in welding related areas including shop safety, hand and portable power tool usage, and welding. Pre-requisites: *None*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Demonstrate knowledge of basic welding processes. • Demonstrate shop safety including the proper use of welding hand and machine tools. • Practice and demonstrate SMAW with various electrodes in all positions.
Student Learning Program Outcomes	Safety and Craftsmanship

NORTHERN NEW MEXICO COLLEGE

WELD 1120 SYLLABUS

Course Number Course Name	WELD 1120 Print Reading for Welders
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	Provides students with the knowledge to read and interpret prints and welding symbols and transfer this knowledge to the workplace with layout tools and measuring instruments. Pre-requisites: *None*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Identify, read and follow AWS welding symbols. • Demonstrate the ability to interpret orthographic and isometric drawings. • Demonstrate the ability to read/interpret pipe welding drawing and schematics. • Demonstrate proficiency in the mathematics utilized in welding and fabrication.
Student Learning Program Outcomes	Trade Standards

NORTHERN NEW MEXICO COLLEGE

WELD 1125 SYLLABUS

Course Number Course Name	WELD 1125 Thermal Cutting
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	Emphasis on safety and the fundamentals of thermal cutting processes. Students will cut various materials and thicknesses of metals in all positions. *Pre-requisite: WELD 1155 GTAW I (Gas Tungsten Arc Welding)*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Identify safety requirements for thermal cutting • Perform how to light, adjust, and shut down oxy-fuel equipment • Perform plasma cutting techniques • Identify correct amperage, gas pressure and flow rate
Student Learning Program Outcomes	Team Work

NORTHERN NEW MEXICO COLLEGE

WELD 1130 SYLLABUS

Course Number Course Name	WELD 1130 SMAW I (Shielded Metal Arc Welding)
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	This course will cover introductory theory and practical applications of structural plate welding, welding safety, handheld torch cutting operations and equipment set up. The development of student skills using the Shielded Metal Arc Welding process in all positions will be stressed. The standards of this course are set by the American Welding Society and utilized in both classroom study and laboratory work. Pre-requisites: *None*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Perform welds on various joints in all positions. • Demonstrate proper shop safety • Demonstrate proficiency in identification of electrode classification and proper storage. • Identify SMAW power sources and their characteristics. • Maintain, use, and safely operate SMAW equipment.
Student Learning Program Outcomes	Safety and Craftsmanship

NORTHERN NEW MEXICO COLLEGE

WELD 1155 SYLLABUS

Course Number Course Name	WELD 1155 GTAW I (Gas Tungsten Arc Welding)
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	A basic course designed to provide the student with the ability to setup, maintain and operate Gas Tungsten Arc Welding (GTAW) equipment safely. Develop skills to weld structural joints to bend tests standards utilizing various metals. Weld quality will be measured in accordance with American Welding Society standards. *Pre-Requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Demonstrate the ability set up GTAW equipment for use, inspect equipment prior to use, perform minor maintenance, and identify potential hazards. • Demonstrate the ability to perform GTAW on various base metals in all positions. • Demonstrate the understanding of basic metallurgical differences in various base and filler metals. • Demonstrate an understanding of welding currents and power sources
Student Learning Program Outcomes	Safety and Craftsmanship

NORTHERN NEW MEXICO COLLEGE

WELD 1140 SYLLABUS

Course Number Course Name	WELD 1140 Gas Metal Arc Welding I (GMAW)
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	Introduces Gas Metal Arc Welding (GMAW) short circuit welding safety, machine set up and shutdown procedures. Topics include personal protective equipment (PPE), GMAW uses, advantages and disadvantages, constant voltage (CV) power source, polarity, electrode types, shielding gasses, and weld discontinuities and defects identification and corrective practices. Lab exercises will include various joints in all positions. *Pre-Requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Demonstrate the ability to safely operate the Gas Metal Arc Welding equipment. • Demonstrate Gas Metal Arc Welding theory and application. • Demonstrate the ability to perform Gas Metal Arc Welding on various joints in all positions. • Demonstrate the ability to fabricate assigned projects while applying proper tolerance to finished projects.
Student Learning Program Outcomes	Industry Proficiency

NORTHERN NEW MEXICO COLLEGE

WELD 1171 SYLLABUS

Course Number Course Name	WELD 1171 Layout and Fabrication
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	This class is an introduction to general layout and fabrication techniques as related to structural welding. Emphasis will be on construction of small projects to tolerances using prints. A variety of welding processes will be used in all positions. *Pre-Requisite: WELD 1130 SMAW I (Shielded Metal Arc Welding)*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Demonstrate the ability to fabricate projects. • Be able to use shop drawing and/or prints to create projects and develop the bill of materials for the project. • Demonstrate ability to properly follow WPS (Welding Procedure Specification) during fabrication.
Student Learning Program Outcomes	Communication and Cooperation

NORTHERN NEW MEXICO COLLEGE

WELD 1220 SYLLABUS

Course Number Course Name	WELD 1220 Pipe Welding I
Credit Value (Breakdown of theory and lab credits)	3 (1 Theory 2 Lab)
Catalog Course Description	Stresses the theory and practical application of pipe welding in the 1-G and 2-G positions. This course will develop skills in the fit-up and technique of welding pipe, using electrodes and various Welding process. *Pre-requisite: WELD 1155 GTAW I (Gas Tungsten Arc Welding)*
Student Learning Outcomes/Objectives /Competencies of the Course	Outcomes • Demonstrate the ability to fabricate projects. • Be able to use shop drawing and/or prints to create projects and develop the bill of materials for the project. • Demonstrate ability to properly follow WPS (Welding Procedure Specification) during fabrication.
Student Learning Program Outcomes	Work Ethics/Professionalism

Appendix A (Part II)

APPENDIX A part II

The Welding Training Certificate program is a generally efficient training program, effectively meeting its educational objectives and preparing students for certification and employment. The program's strengths include:

Comprehensive Curriculum: The program covers a wide range of welding techniques and practices, ensuring that students gain a strong foundational knowledge as well as exposure to specialized areas such as MIG, TIG, and stick welding.

Qualified Instructors: Experienced instructors with industry certifications and practical experience provide valuable insights and hands-on training, enhancing the learning experience.

Hands-On Training: The program emphasizes practical, hands-on training in well-equipped labs, allowing students to develop their skills in real-world scenarios and improving their confidence and competence.

Industry Partnerships: Collaborations with local businesses and industries ensure that the program remains relevant to current job market demands and provides students with opportunities for internships and employment.

Flexible Learning Options: Offering various scheduling options, including evening and weekend classes, accommodates a diverse range of students, including those who are working or have other commitments.

Safety Protocols: The program prioritizes safety by incorporating comprehensive safety training, ensuring that students understand and can implement best practices in a welding environment.

Career Services Support: Access to career services, including job placement assistance, resume writing workshops, and interview preparation, helps students transition smoothly into the workforce.

Certifications Preparation: The curriculum is aligned with industry certification standards, preparing students for relevant certifications that enhance their employability and professional credibility.

Networking Opportunities: Students benefit from networking opportunities through events, workshops, and industry connections, building relationships that can lead to job opportunities.

Regular Feedback and Assessments: Ongoing assessments and evaluations provide students with timely feedback on their performance, enabling them to track their progress and make necessary improvements.

These strengths contribute to the program's overall effectiveness in equipping students with the skills and knowledge necessary for successful careers in welding.

Appendix B (Part I)

WELD 1110

Introduction to Welding Fundamentals

Course Description

This course focuses on the fundamental techniques employed in the welding field. It is a laboratory approach to understanding and building skills in welding related areas including shop safety, hand and portable power tool usage, and welding.

Student Learning Outcomes

1. Demonstrate knowledge of basic welding processes.
2. Demonstrate shop safety incluing the proper use of welding hand and machine tools.
3. Practice and demonstrate SMAW with various electrodes in all positions.

WELD 1120

Print Reading for Welders

Course Description

Provides students with the knowledge to read and interpret prints and welding symbols and transfer this knowledge to the workplace with layout tools and measuring instruments.

Student Learning Outcomes

1. Identify, read and follow AWS welding symbols.
2. Demonstrate the ability to interpret orthographic and isometric drawings.
3. Demonstrate the ability to read/interpret pipe welding drawing and schematics.
4. Demonstrate proficiency in the mathematics utilized in welding and fabrication.

WELD 1130

SMAW (Shielded Metal Arc Welding) I

Course Description

This course will cover introductory theory and practical applications of structural plate welding, welding safety,handheld torch cutting operations and equipment set up. The development of student skills using the Shielded Metal Arc Welding process in all positions will be stressed. The standards of this course are set by the American Welding Society and utilized in both classroom study and laboratory work.

Student Learning Outcomes

1. Perform welds on various joints in all positions.

2. Demonstrate proper shop safety
3. Demonstrate proficiency in identification of electrode classification and proper storage.
4. Identify SMAW power sources and their characteristics.
5. Maintain, use, and safely operate SMAW equipment.

WELD 1125

Thermal Cutting

Course Description

Emphasis on safety and the fundamentals of thermal cutting processes. Students will cut various materials and thicknesses of metals in all positions.

Student Learning Outcomes

1. Identify safety requirements for thermal cutting
2. Perform how to light, adjust, and shut down oxy-fuel equipment
3. Perform plasma cutting techniques
4. Identify correct amperage, gas pressure and flow rate

WELD 1140

Gas Metal Arc Welding I

Course Description

Introduces Gas Metal Arc Welding (GMAW) short circuit welding safety, machine set up and shutdown procedures. Topics include personal protective equipment (PPE), GMAW uses, advantages and disadvantages, constant voltage (CV) power source, polarity, electrode types, shielding gasses, and weld discontinuities and defects identification and corrective practices. Lab excercises will include various joints in all positions.

Student Learning Outcomes

1. Demonstrate the ability to safely operate the Gas Metal Arc Welding equipment.
2. Demonstrate Gas Metal Arc Welding theory and application.
3. Demonstrate the ability to perform Gas Metal Arc Welding on various joints in all positions.
4. Demonstrate the ability to fabricate assigned projects while applying proper tolerance to finished projects.

WELD 1155

GTAW (Gas Tungsten Arc Welding) I

Course Description

A basic course designed to provide the student with the ability to setup, maintain and operate Gas Tungsten Arc Welding (GTAW) equipment safely. Develop skills to weld structural joints to bend tests standards utilizing various metals. Weld quality will be measured in accordance with American Welding Society standards.

Student Learning Outcomes

1. Demonstrate the ability set up GTAW equipment for use, inspect equipment prior to use, perform minor maintenance, and identify potential hazards.
2. Demonstrate the ability to perform GTAW on various base metals in all positions.
3. Demonstrate the understanding of basic metallurgical differences in various base and filler metals.
4. Demonstrate an understanding of welding currents and power sources

WELD 1171

Layout and Fabrication

Course Description

This class is an introduction to general layout and fabrication techniques as related to structural welding. Emphasis will be on construction of small projects to tolerances using prints. A variety of welding processes will be used in all positions.

Student Learning Outcomes

1. Demonstrate the ability to fabricate projects.
2. Be able to use shop drawing and/or prints to create projects and develop the bill of materials for the project.
3. Demonstrate ability to properly follow WPS (Welding Procedure Specification) during fabrication.

WELD 1220

Pipe Welding I

Course Description

Stresses the theory and practical application of pipe welding in the 1-G and 2-G positions. This course will develop skills in the fit-up and technique of welding pipe, using electrodes and various Welding process.

Student Learning Outcomes

1. **Demonstrate an understanding of 1-G and 2-G pipe welding using a variety of pipe sizes.**
2. **Demonstrate the ability to produce destructive test samples to AWS and/or API standards.**
3. **Demonstrate the ability to prepare, fit and tack pipe to specifications, getting pipe ready to weld.**
4. **Demonstrate knowledge of appropriate pipe fitting terminology and calculations.**

Addendum B - II

NORTHERN NEW MEXICO COLLEGE

Program-Level
Student Learning Outcomes

Program of Study: Welding (WELD)

Degree/Credential: Certificate

Program Assessment Coordinator: Joseph Padilla
Assessment Contributor: Dr. Frank Loera

Student Learning Outcomes

1. Students demonstrate personal wellness as a Welding Technician through outlining and identifying person/work priorities. **Safety and Craftsmanship**
2. Students will be able to demonstrate logical reasoning in the Welding trade through identifying best material selection, identifying adequate current processes, and discussing Welding concepts by industry name, identifying materials by industry standard terms, and explaining processes using industry appropriate terms. **Industry Proficiency**
3. Students will demonstrate Welding technology through using current Welding tools, interpreting construction drawings, and demonstrating code compliance. **Trade Standards**
4. Students will be able to implement Welding projects in a group by expressing ideas, accepting others' ideas, and demonstrating taking personal responsibility for their own portion of the project. **Team Work**
5. Students will be able to interact with people in a professional manner in the construction industry by identifying diversity in skill sets and demonstrating mutual respect for others. **Communication and Cooperation**
6. Students will apply employability skills in the Welding trade by demonstrating a willingness to work and conducting themselves in an industry leading manner. **Work Ethics/Professionalism**

Addendum B - II

Assessment Plan

Student Learning Outcomes

- Each of the 6 student learning outcomes has a course identified where it will be measured during the two-year cycle.
- Every outcome has a full-time faculty member identified and responsible for the measurement and the report.

- Monthly departmental meetings will provide time for discussion and updates on assessment and measurement instruments.

Data Sampling

- Data will be collected only from students enrolled in the class for credit.
- Since current classes are typically less than 20 students, there is no sampling for assessment. This will be revisited if the size of the classes increases.
- Dropouts are not considered to evaluate the achievement of the outcome if the measurement is taken after the drop.

Definitions of Performance

- Assessment instruments will be peer-reviewed before using them.
- Data will be presented in histograms/table.

Level of Attainment of outcomes per student:

- Target Met: a student achieves a 70% of the instrument scale.
- Target Not Met: a student does not achieve a 70% of the instrument scale.

Level of Attainment of outcomes per class:

- Target met: 75% of all students achieved their target.

- Target in progress: less than 75% of all students achieve their target.

Level of Attainment of outcomes for the Program:

- For 100-level and 200-level classes, the department assigns 1 point if the level of attainment is marked as "Target in progress".
- For 100-level and 200-level classes, the department assigns 2 points if the level of attainment is marked as "Target met".

Addendum B - II

The level of attainment of a student outcome considering all courses where the student outcome is measured, is defined as:

$$Level\ of\ attainment\ of\ outcome = \frac{Points\ achieved}{Maximum\ points\ in\ outcome}$$

Program outcomes are measured annually. Data is collected, aggregated, and analyzed. Areas for program improvement are identified and actions are implemented. Assessment Data results are documented on the Program Assessment Report.

PSLO Assessment Schedule Fall 2025 – Spring 2026

Fall 2025
Introduction to Welding Fundamentals: Outcome 1
Print Reading for Welders: Outcome 3
Shielded Metal Arc Welding I (SMAW I): Outcomes 2
Gas Metal Arc Welding I (GMAW I): Outcome 1
Spring 2026
Gas Tungsten Arc Welding I (GTAW I): Outcome 1
Layout and Fabrication: Outcome 4
Pipe Welding, I: Outcome 5
Thermal Cutting: Outcome 6

CURRICULUM MAP

Technical Mandatory Courses	1	2	3	4	5	6
Introduction to Welding Fundamentals	A					
Print Reading for Welders			A			
Shielded Metal Arc Welding I (SMAW I)		A				
Gas Metal Arc Welding I (GMAW I)	A					
Gas Tungsten Arc Welding I (GTAW I)	A					
Layout and Fabrication				A		
Pipe Welding, I					A	
Thermal Cutting						A

APPENDIX C

Welding Program Budget Estimates

	Year 1	Year 2	Year 3	Year 4	Year 5
Instructor Salary x 1	$60,000	$61,800	$63,654	$65,564	$67,530
Benefits	$21,000	$21,630	$22,247	$22,947	$23,636
Salary Total	$81,000	$83,430	$85,901	$88,511	$91,166
Supplies	$25,000	$20,000	$20,000	$20,000	$20,000

Assumptions:

1 Most equipment is available, hand tools and supplies required year 1
2 Yea 2,r 3, 4, and 5 levels out with repaeated supplies for coursework/labs
3 Instructor salary increased 3 percent yearly for COL increases
3 Benefits estimated at 35%
5 One FTE required, Dual credit instructors will be from secondary schools
6 HED workforce funding for non creditstudent tuition for three years.
7 Trade Grants and contracts for training to aid in budget sustainment.

Welding Program Student Enrollment Estimates

	Year 1	Year 2	Year 3	Year 4	Year 5
Dual Credit	10	15	20	25	30
Traditional	20	25	30	35	40

Welding Program Student Tution Estimates

Tuition Revenue $110 per credit at 30 credits per year	Year 1	Year 2	Year 3	Year 4	Year 5
	$52,800	$66,000	$79,200	$92,400	$105,600

Assumptions:

1 Tuition is based on Traditional Student enrollment only
2 Traditional student averaging 12 credits per semester/24 credits per academic year
Program is supplemented financially by Branch Community College Mill
3 Levy
4 Plumbers/Pipefitters Union supported Mill Levy and has an MOU with NNMC to develop such programs
5 The Apprenticeship Pathway and Employment will stimulate enrollment
6 Enrollment estimates are conservative as dual credit students will start matriculating

NOTE: The website will have the most current version.

New_Acad_Signature Approval Form

Northern New Mexico Branch Community College
New Degree Program
Signature Approval Form
Spring 2023

First Phase of Approvals Academic Departments Collects Signatures	
Office of the Provost / 1st Review / / Approval to Implement / / Denial / / Approval Pending Additional Planning Justification	Sign Date 9/17/24
External Advisory Committee Chair / / (Yes) / / No Justification Fits w/ Workforce Integration Networks goals	Sign Date 9/26/24
Branch Community College Internal Faculty Committee Chair / (Yes) / / No Justification Department Chair	Date 9/26/24
Second Phase of Approvals Academic Department Collects Signatures	Sign
Office of the Provost / 2nd Review / / Approval to Implement / / Denial / / Approval Pending Additional Planning Justification	Date 10/2/24
Librarian / (Yes) / / No Justification	Sign Date 10/2/24
Assessment Office / / Yes / / No Justification	Sign Courtney Bruch Date 10/11/24
Registrar / (Yes) / / No Justification	Sign Janice Baca Date 10/14/2024
Financial Aid / (Yes) / / No Justification	Sign Sondra Adams Date
Distance Ed Director / / (Yes) / / No Justification	Sign Date
Facilities Director / / (Yes) / / No Justification	Sign Date

Institutional Research / / Yes / / No	Sign Ormella Sanchez
Justification	Date 10/18/2024
Human Resources / / Yes / / No	Sign Stephanie Sandoval
Justification	Date 10/21/2024
VP for Finance and Administration / / Yes / / No	Sign
Justification	Date 10/22/2024
Office of the Provost / / Approval to Implement / / Denial / / Approval Pending Additional Planning	Sign
Justification	Date 10/22/24
FINAL APPROVALS Provost Office Collects Signatures	Sign
Office of the President / / Approval to Implement / / Denial / / Approval Pending Additional Planning	Date
Justification for approval or denial	Sign
Board of Regents / / Approval / / Denial / / Approval Pending Additional Planning	Date
Justification for approval or denial	
Mandatory Meeting: Initiator of the Program Proposal calls for a meeting with the Office of the Provost, HLC ALO, Registrar, Institutional Effectiveness, and Financial Aid	Sign
Feedback to Institution	Date
	Sign
	Date
	Date

Office of the Provost
NORTHERN New Mexico College

MEMORANDUM

To: Board of Regents - Northern New Mexico College

From: Dr. Larry Guerrero, Interim Provost, and VP for Academic Affairs
Through President Hector Balderas

Date: November 21, 2024

Re: Program Elimination Exemption Granted - Post Baccalaureate Certificate in Information Technology (IT)

Issue
Pursuant to the Academic Program Elimination Policy, the Post Baccalaureate Certificate in IT has been recommended for a Program Elimination Exemption by the faculty of the Program, the Faculty Senate, the Office of the Provost and the Office the President.

Overview
The Department of Engineering and Technology has a Post Baccalaureate Certificate in IT program listed on our NNMC catalog for a very long time that practically does no longer exist. The department does not offer these courses and we did not have any students in that program for a very long time (at least 8/9 years, possibly more). The faculty agrees that having the program listed on the catalog could be misleading, and we should remove it from our catalog.
Attached are the following documents:
- Endorsement from Office of the Provost and Office of the President
- Endorsement from the Faculty Senate
- Program Elimination Exemption Granted by the Educational Policy Committee
- Program Elimination Exemption Request Form from Department Chair

Outcome
I recommend that the Board of Regents approve the Program Elimination Exemption in the Post Baccalaureate Certificate in Information Technology.

NNMC Apps

Sally E Martinez <sally.martinez@nnmc.edu>

Post Baccalaureate Certificate in IT

1 message

Larry Guerrero <larry.guerrero@nnmc.edu> Wed, Nov 13, 2024 at 5:10 PM
To: Anne Gray <anne.gray@nnmc.edu>, Scott Braley <scott.braley@nnmc.edu>, Ashis Nandy <ashis@nnmc.edu>, Sneha Chakradhar <sneha.chakradhar@nnmc.edu>, Johanna Case-Hofmeister <johanna.case@nnmc.edu>, Sandra Rodriguez <sandra.rodriguez@nnmc.edu>, Sushmita Nandy <sushmita.nandy@nnmc.edu>, Lori Baca <lbaca@nnmc.edu>, Joseph E Padilla <joe.padilla@nnmc.edu>, Frank Loera <frank.loera@nnmc.edu>, Ellen Trabka <etrabka@nnmc.edu>, Lori Franklin <lorig@nnmc.edu>, Ana Vasilic <ana.vasilic@nnmc.edu>, Melanie Colgan <melanie.colgan@nnmc.edu>, Sally E Martinez <sally.martinez@nnmc.edu>, Sadia Ahmed <sadia.ahmed@nnmc.edu>, Steven J Cox <steve.cox@nnmc.edu>

Hi All:

Below is the correspondence between the President and I. The approval is from the President's Office.

President:

I approve the following exemption recommendation from the Education Policy Committee and Faculty Senate. The request is to eliminate the Post Baccalaureate Certificate in IT offered from the Department of Engineering. This elimination exemption approval prevents the process of going through the complete Academic Program Elimination process.

Thanks,

L.G.

Thank you Larry. I have reviewed the documents and agree with your recommendation. We will move forward with recommending to the Board that the program be eliminated. Per the policy will you please share our recommendation with the chairs, faculty senate and members of the department affected.

Thank you.

Hector Balderas, JD, CFE
President
505 747.2140
hector.balderas@nnmc.edu

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Larry Guerrero
Assoc. VP of Student Success
Office: AD 217
505.747.2226
Mobile: 405.923.3819
larry.guerrero@nnmc.edu

NNMC Apps

Sally E Martinez <sally.martinez@nnmc.edu>

Fwd: Program Elimination Expemption - Granted

12 messages

Larry Guerrero <larry.guerrero@nnmc.edu> Thu, Oct 24, 2024 at 10:10 AM
To: Sally E Martinez <sally.martinez@nnmc.edu>

---------- Forwarded message ---------
From: **Scott Braley** <scott.braley@nnmc.edu>
Date: Thu, Oct 24, 2024 at 9:04 AM
Subject: Fwd: Program Elimination Expemption - Granted
To: Larry Guerrero <larry.guerrero@nnmc.edu>

Dr. Guerrero - just a followup to last month's email - the Faculty Senate has endorsed the recommendation of the Educational Policy Committee regarding the Program Elimination Exemption.

Thanks very much!
Scott

G. Scott Braley
Associate Professor, Radiation Protection
Biology, Chemistry, Environmental Science
Northern New Mexico College
Office: HT 109
505.747.5469

Begin forwarded message:

From: Anne Gray <anne.gray@nnmc.edu>
Subject: Re: Program Elimination Expemption - Granted
Date: September 25, 2024 at 3:34:19 PM MDT
To: Scott Braley <scott.braley@nnmc.edu>
Cc: Ashis Nandy <ashis@nnmc.edu>, Heather Winterer <hwinterer@nnmc.edu>, Anna Case-Hofmeister <johanna.case@nnmc.edu>, Melanie Colgan <melanie.colgan@nnmc.edu>, Michael Gideon <michael.gideon@nnmc.edu>, Reynold Silber <reynold.silber@nnmc.edu>, Rhiannon West <rhiannon.west@nnmc.edu>, Robert Tierney <robert.tierney@nnmc.edu>, Ruben Olguin <ruben.olguin@nnmc.edu>, Sean Bowman <sean.bowman@nnmc.edu>, Larry Guerrero <larry.guerrero@nnmc.edu>

Hi Scott,
The Ed Policy Committee has accepted the Program Elimination Exemption request by the Department of Engineering and Technology regarding the Post-Baccalaureate Certificate in IT. We are writing to request time during the next Faculty Senate meeting to present the request, the EPC's decision, and take a vote of the Faculty Senate members on the elimination of the program. The paperwork for the program elimination is attached.
Please let me know if you have any questions or need any additional information.
Anne

On Tue, Sep 17, 2024 at 10:52 AM Anne Gray <anne.gray@nnmc.edu> wrote:
> Good morning Dr. Guerrero,
> The Education Policy Committee (EPC) met this morning to review a request from the Department of Engineering and Technology and Department Chair, Dr. Ashis Nandy, to be granted an Academic Program Elimination Exemption for the Post Baccalaureate Certificate in Information Technology. A quorum of the committee reviewed the request, found it aligned to the guidelines required for an exemption, and voted to grant the exemption request.

Attached is the documentation of the request and the recommendation of the EPC.
Please let us know if you have any questions or require additional information.
Sincerely,
Anne Gray, co-chair EPC

--
Anne Gray, Ph. D. (she/her)
Assistant Professor Elementary Education
Department of Teacher Education
505 747.5462
anne.gray@nnmc.edu

Northern New Mexico College
921 Paseo de Oñate
Española, NM 87532
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--
Anne Gray, Ph. D. (she/her)
Assistant Professor Elementary Education
Department of Teacher Education
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Larry Guerrero
Assoc. VP of Student Success
Office: AD 217
505.747.2226
Mobile: 405.923.3819
larry.guerrero@nnmc.edu

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3 attachments

Post Baccalaureate Certificate in IET.docx
14K

Academic-Program-Elimination-Exemption-Request-Form-Post-Bac in IT.pdf
285K

Post-Bac Cert in IT- Elimination Exemption Request.pdf
126K

NORTHERN New Mexico College

Academic Program Elimination Exemption Request Form

To: Educational Policy Committee (EPC)

From (Department Chair/Director): Ashis Nandy, Chair, Department of Engineering and Technology

Purpose: Pursuant to Northern New Mexico College's Academic Program Elimination Policy, Section IV, Exemption Request, the Department of Engineering and Technology has determined that the academic program identified herein is no longer needed and requests that the EPC make a direct recommendation to eliminate the academic program identified without going through the complete Academic Program Elimination process.

Program: Post Baccalaureate Certificate in Information Technology

Reason(s) for Proposed Elimination (Check all that apply):

- ☐ The result of the program review results or the lack of implementation of the recommendations of a program review, as indicated by shifts in enrollment, cost of instruction, shifts in missions and responsibilities, quality indicators, etc.;
- ☐ Loss of accreditation;
- ☐ Loss of professional licensure requirements (at least in the state of NM)
- ☒ Lack of, or low, enrollment;
- ☐ Program illegality;
- ☐ Critical financial exigency/crisis for the College as a whole as determined or declared by the Board of Regents;
- ☒ Other, please specify (attach additional sheets or documentation, if necessary):

EPC Recommendation:

- ☑ Exemption request granted; the EPC makes the direct recommendation to eliminate the program
- ☐ Exemption request denied

Received by Office of the Provost

To:
Co-Chairs,
Educational Policy Committee
Northern New Mexico College

From:
Ashis Nandy
Chair, Department of Engineering and Technology
Northern New Mexico College

Date: September 5, 2024

Re: Exemption Request for Elimination of Post-Baccalaureate Certificate in IT

Dear Educational Policy Committee Co-Chairs,

The Department of Engineering and Technology has a Post Baccalaureate Certificate in IT program listed on our NNMC catalog for a very long time that practically does no longer exist. The department does not offer these courses and we did not have any students in that program for a very long time (at least 8/9 years, possibly more). The faculty agrees that having the program listed on the catalog could be misleading, and we should remove it from our catalog.

I am requesting an exemption of the full review process for program elimination and seeking your approval for the elimination of the program. I have enclosed the Academic Program Elimination Exemption Request Form. Please let me know if you have any questions.

Thank you.

Sincerely,

Ashis Nandy
Digitally signed by Ashis Nandy
Date: 2024.09.05 13:02:38 -06'00'

Ashis Nandy

Post Baccalaureate Certificate in INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Post Baccalaureate Certificate in Engineering in Information Technology is a practice-oriented professional program, meant to extend students' undergraduate education. The program will provide high-quality and affordable education to engineers who want to master their knowledge in networks used for critical data entry, transfer, retrieval, and management of information systems.

Coursework in the program is practice-oriented and prepares students to work as leaders in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. Coursework in the program consists of gateway courses towards pursuit of a master's program in the field.

Completion of this program should result in the following student outcomes:

1. Graduates will have gained the theoretical and hands-on experience needed to pursue a Master's Program in the field.
2. Graduates will encompass a deeper understanding of management solutions for professionals in information systems and information technology.
3. Graduates will excel in highly technical leadership roles.

Completion of this program should result in the following student outcomes:

1. An ability to apply knowledge of Information Engineering Technologies
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. The ability to design, implement, provide, and supervise the security of facilities involved with the processing and transfer of information

PROGRAM REQUIREMENTS

Electrical, Electronic, and Computer Engineering (3 cr)

EECE	5547	Routing and Switching (3)

Information Technology (9 cr)

IT	5510	Information Assurance and Security (3)
IT	5530	Network Administration (3)
IT	5599	Topics in IT (3)

Support Technology (3 cr)

ENGR	5578	Engineering Ethics (3)

TOTAL CREDITS: 15