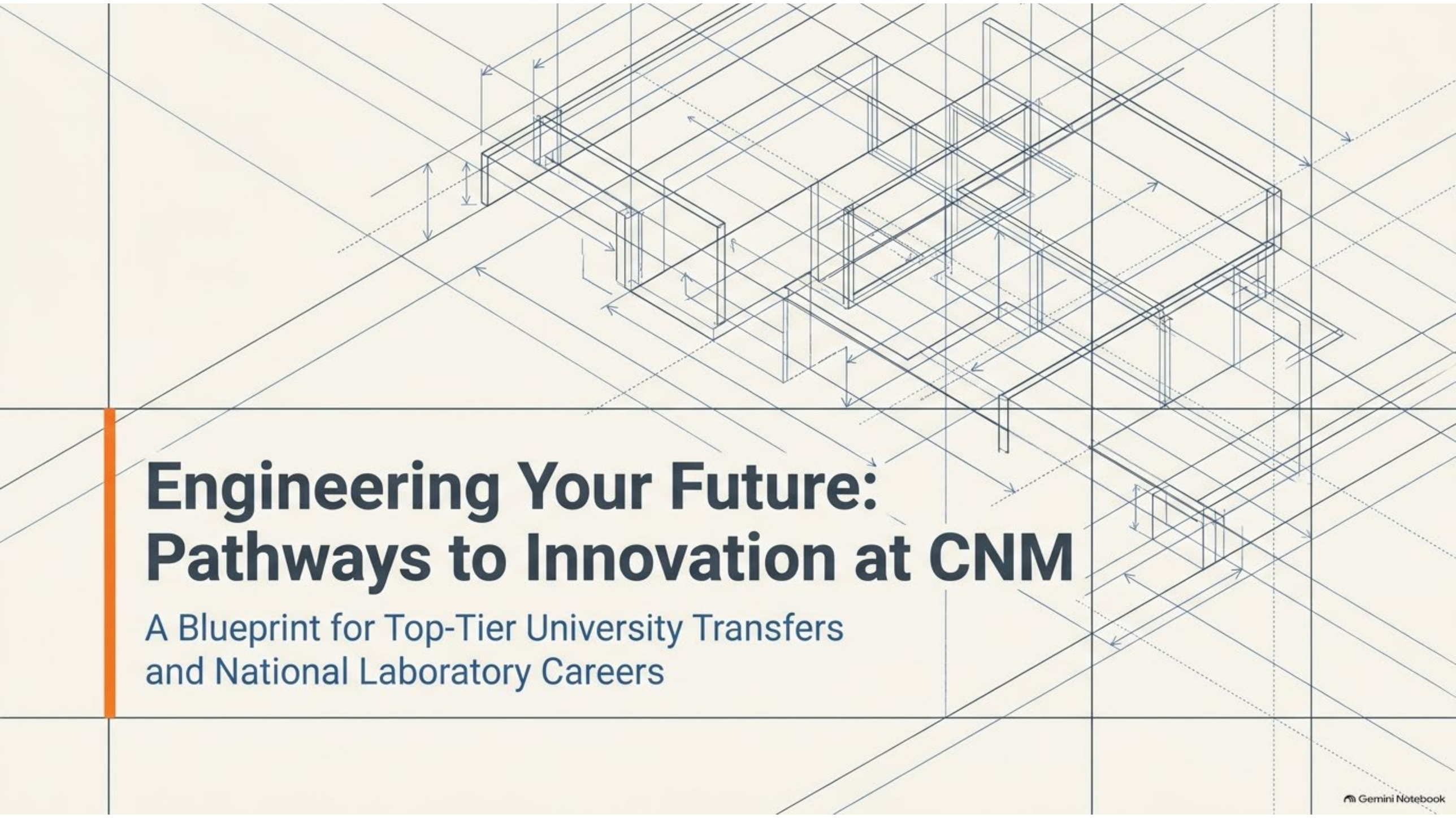


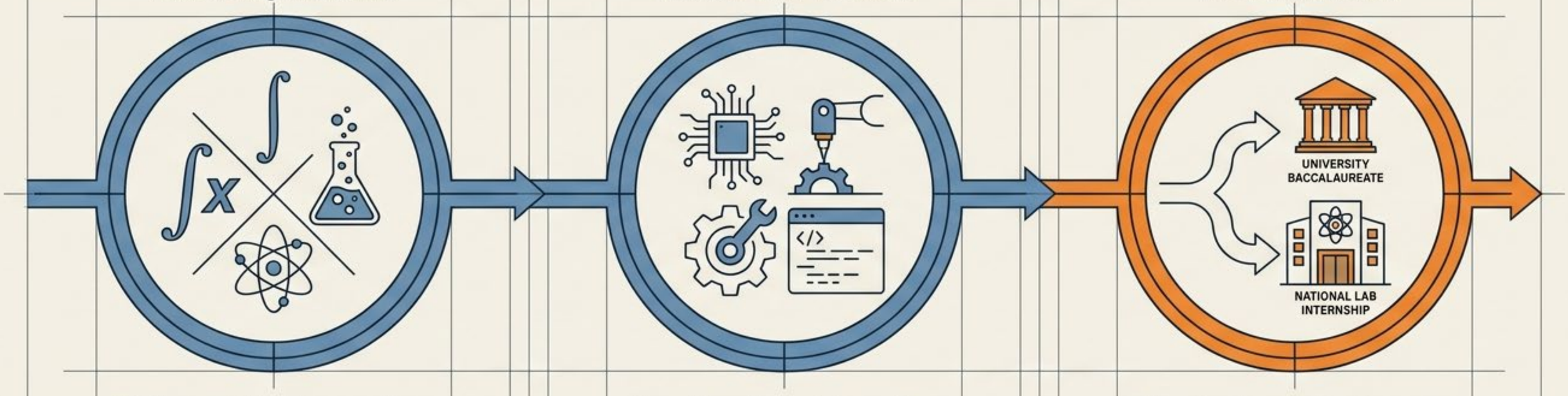
Engineering Your Future: Pathways to Innovation at CNM

A Blueprint for Top-Tier University Transfers and National Laboratory Careers

Gemini Notebook

The Core Premise

Foundational Science
Mastering the Core



Building unshakeable competence in advanced mathematics, chemistry, and physics.

Technical Application
Hands-On Precision

Translating theory into practice through fabrication, coding, and systems engineering.

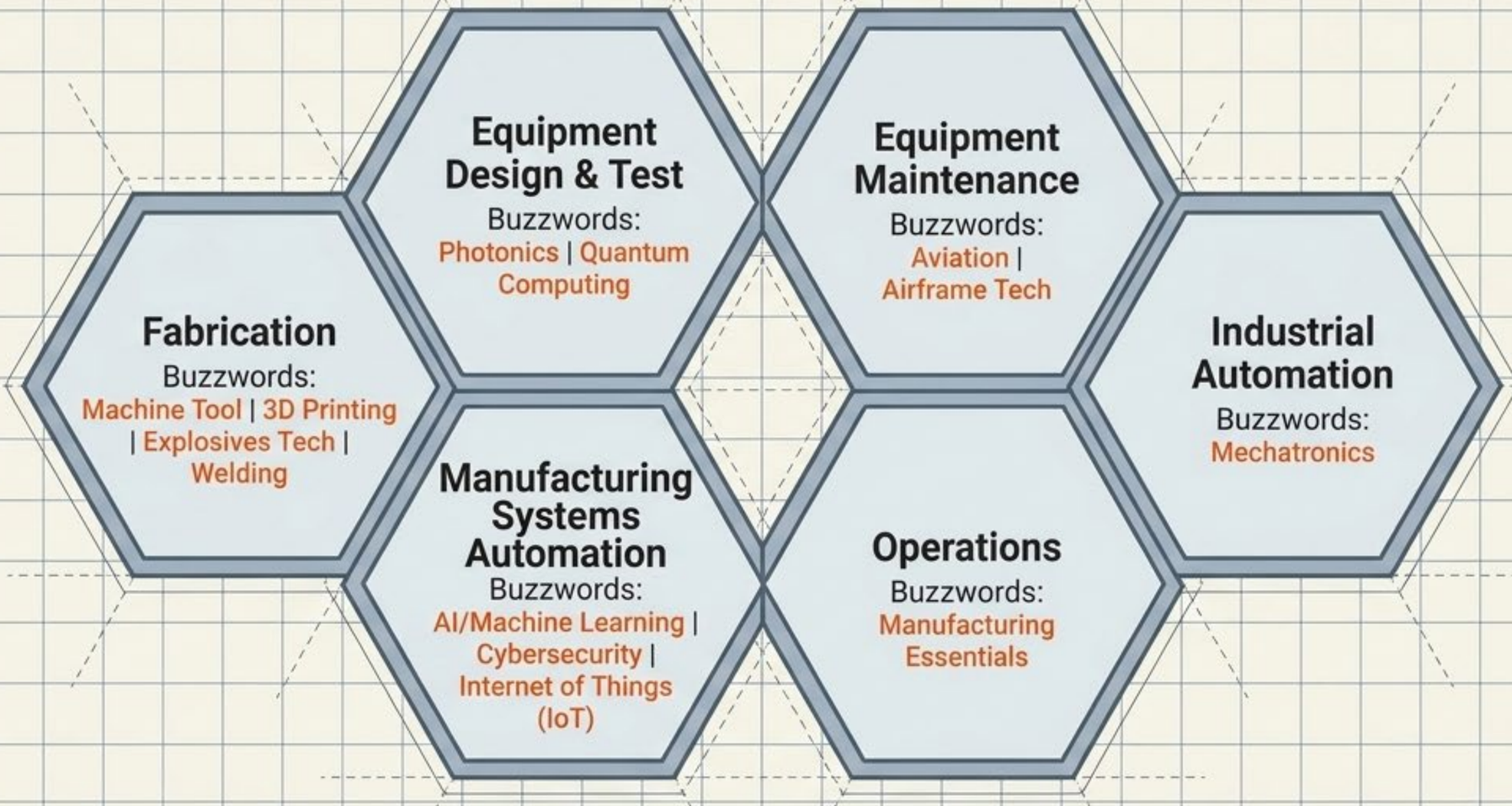
Elite Endpoint
The Destination

Seamless transfer to a four-year University Baccalaureate or direct entry into National Laboratory internships.

CNM provides the critical bridge between foundational science and elite industry applications.
Start your journey in an inclusive community that fosters growth and ambition.

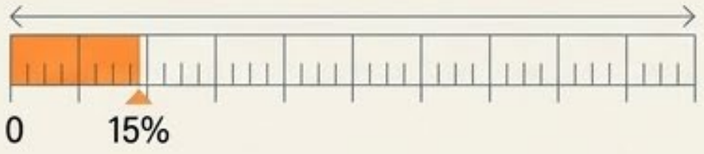
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The Landscape of Opportunity



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The Credentials Architecture

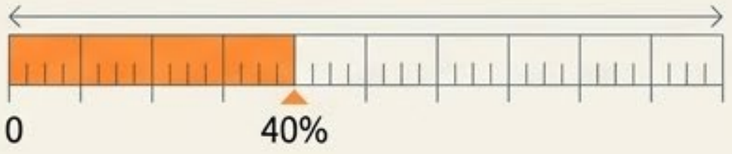


Job Training

10 weeks to 1 term (16-80 hours)

Immediate upskilling and certification.

- Soldering IPC-J-STD-001 (5 days)
- IoT (10 weeks)
- Quantum Technician (10 weeks)



Professional Certificate

1 to 3 terms (Part/Full-Time)

Direct-to-industry credentials.

- Explosives Technician
- Mechatronics Industrial Automation



Associate Degree (A.S.)

4 to 6 terms

Baccalaureate transfer path.

- Engineering
- Physics
- Aviation Maintenance Technology

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Pathway 1: The A.S. in Engineering

The first two years of a bachelor's degree in engineering. A highly structured 60-credit-hour pathway built for direct transferability to four-year institutions (with established UNM transfer agreements).

Alumni Spotlight: Vicky Lizardi-Lobb



CNM's supportive environment enabled her transfer to a university and acquisition of a prestigious internship, turning lifelong dreams into reality.

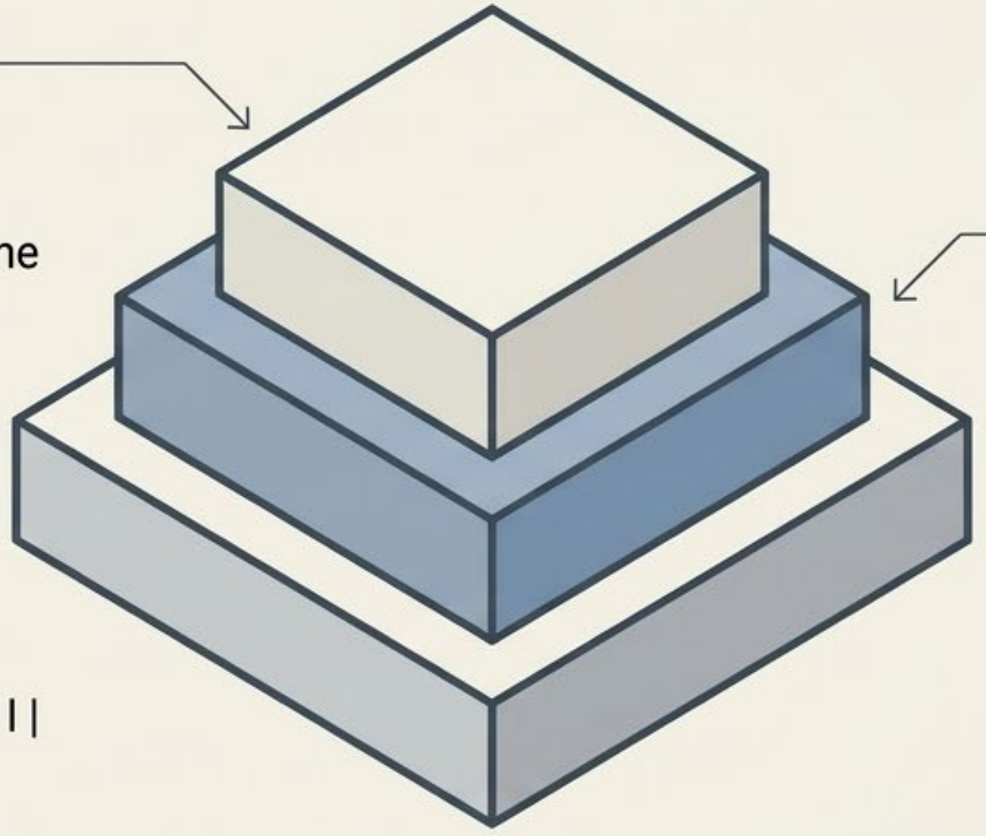
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The Engineering A.S. Knowledge Stack

Minimum 60 Credit Hours

Term 4: Refinement & Specialization

Professional and Technical Communication | Humanities & Fine Arts | 6 Credit Hours of Advanced Engineering Electives



Term 3: Advanced Core

Calculus III | Calculus-Based Physics II | Introductory Computer Science

Terms 1 & 2: Core Math & Science

Calculus I & II | General Chemistry I | Calculus-Based Physics I | Composition I & II

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The Engineering Electives Matrix

Computer / Software

MATLAB | Python

C Programming

Java I

Mechanical / Physical

Thermodynamics | Statics

Dynamics | Intro to Welding

Basics of CAD

Electrical / Mathematical

Circuit Analysis I & II

Differential Equations

Linear Algebra

Chemical / Specialized

Organic Chemistry I

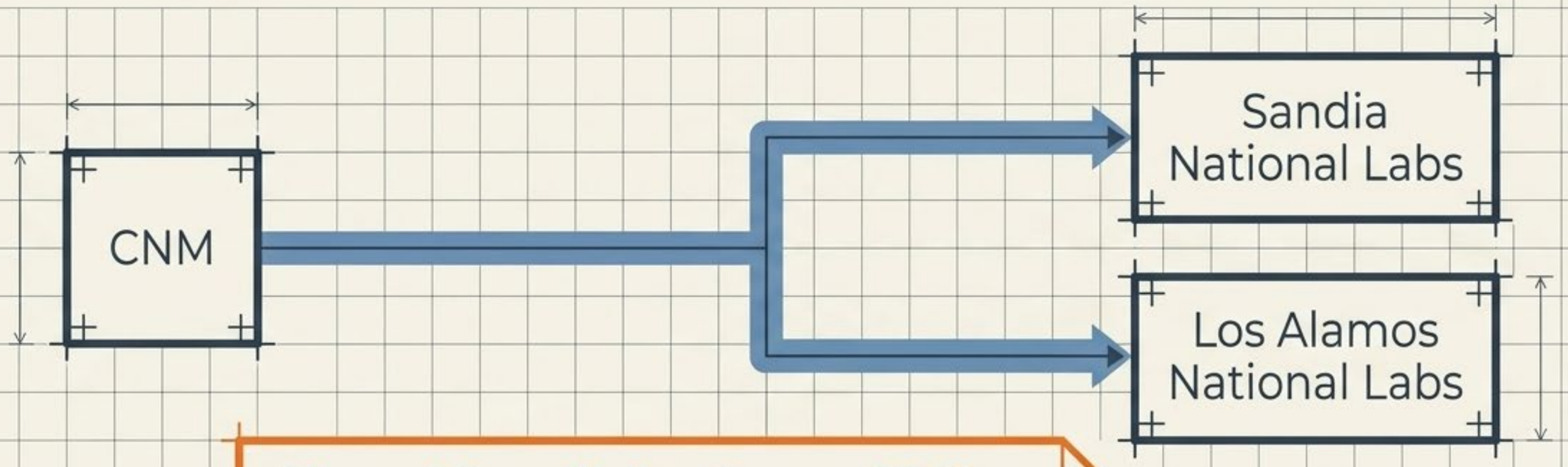
Explosives Tech & Safety

Students planning to transfer are advised to cross-reference with their intended transfer university's catalog.

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Pathway 2: Explosives Technician Certificate

A specialized credential designed to prepare students for internships at premier national facilities.



Alumni Spotlight: Aaron Kieling

Now working under the direction of research scientists, prepping and executing highly sensitive experiments related to explosives technology.

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The Explosives Tech Progression

31 Credit Hours

Term 1: Foundations

General Chemistry I

College Algebra

Survey of Engineering Fields

Term 2: The Core

Explosives Technology & Safety

Trigonometry / Pre-Calculus

Term 3: Refinement

Professional & Technical Communication

Approved Elective
(Machine Tool, Welding, or IoT)

Credit for Prior Learning

Completing CNM Ingenuity's Deep Dive IoT program automatically applies credits toward this certificate.

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The Realities of High-Security Industry Access



Screening & Clearances

Students must be prepared for mandatory drug screenings and criminal background checks prior to employment at Sandia or Los Alamos National Laboratories.



Background Implications

A felony conviction may prevent employment at National Laboratories and limit available opportunities in the explosives field.

These strict parameters are a testament to the high-security, prestigious nature of the destination careers.

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The Ultimate Comparison Matrix

	A.S. in Engineering	Explosives Tech Certificate
Primary Goal	University Baccalaureate Transfer	Elite National Lab Internship
Time & Scope	4-6 Terms (60 Credit Hours)	3 Terms Part-Time (31 Credit Hours)
Financial Aid	Eligible & 150% Rule Subsidized Loans Apply	Eligible & 150% Rule Subsidized Loans Apply
Key Outcome	Completes the first two years of a Bachelor of Science degree	Hands-on credential required for direct application to Sandia/LANL intern programs

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The Support Ecosystem

Inclusive Community

An MSE environment specifically designed to foster growth, ambition, and belonging.

Experienced Instructors

Expert guidance in welding, fabrication, chemistry, math, and physics.

The Student

Transfer Agreements

Established articulation agreements with New Mexico universities to guarantee credit

Financial Accessibility

Federal financial aid eligible programs with direct subsidized loan options.

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Initialize Your Pathway



1. Consult the Blueprint

Review the course catalog recommendations carefully to avoid scheduling problems.

2. Select Your Vector

Choose between the Baccalaureate Transfer track (A.S.) or the Direct-to-Industry track (Certificate).

3. Execute

Both the Engineering Degree and Explosives Certificate programs can be started Any Term at the Main Campus.

Scan to view the full School of Math, Science & Engineering (MSE) catalog and declare your pathway today.

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