



ACADEMIC PROGRAM PROPOSAL FORM

(Revised: January 2021)

DIRECTIONS: Use this form when proposing a new major or primary field of study, new emphasis (BAS only), or new degree or certificate (30+ credits) program. For more detail on the NSHE program approval process, see the last page of this form.

DATE SUBMITTED: 3/28/2024

INSTITUTION: University of Nevada Las Vegas

REQUEST TYPE: ☐ New Degree
☒ New Major or Primary Field of Study
☐ New Emphasis (BAS only)

Date of AAC Approval:

06-05-24

Date of Board Approval:

DEGREE: Check applicable box

- | | |
|---|--|
| <input type="checkbox"/> Certificate: 30+ Credits | <input type="checkbox"/> Associate of Arts (AA) |
| <input type="checkbox"/> Associate of Science (AS) | <input type="checkbox"/> AA/AS |
| <input type="checkbox"/> Associate of Applied Science (AAS) | <input type="checkbox"/> Bachelor of Applied Science (BAS) |
| <input checked="" type="checkbox"/> Bachelor of Arts (BA) | <input type="checkbox"/> Bachelor of Science (BS) |
| <input type="checkbox"/> Master of Science (MS) | <input type="checkbox"/> Master of Arts (MA) |
| <input type="checkbox"/> Doctor of Philosophy (Ph.D.) | <input type="checkbox"/> Other or Named Degree: _____ |

MAJOR OR PRIMARY FIELD OF STUDY (i.e. Animal Science): Engineering Technology

INCLUDED IN THE NSHE PLANNING REPORT: ☒ Yes ☐ No

(Website for NSHE Planning Reports: <https://nshe.nevada.edu/administration/academic-student-affairs/reporting/planning/>)

TOTAL NUMBER OF CREDITS TO PROGRAM COMPLETION: 120

PROPOSED SEMESTER/TERM OF IMPLEMENTATION: Fall 2025

Action requested (specify full program title):

The University of Nevada, Las Vegas requests approval of a new Bachelor of Arts in Engineering Technology.

A. Brief description and purpose of proposed program. For proposed certificates (30+ credits), provide any existing degree or program under which the certificate falls.

The proposed B.A. Engineering Technology is designed to serve as an alternative pathway for students who may not meet the conventional admission requirements for UNLV's Bachelor of Science (BSc) programs in Engineering and Computer Science at UNLV. Despite not meeting the traditional

prerequisites, these students harbor a strong desire to acquire skills in engineering, computer science, IT, and cybersecurity, all of which can significantly enhance their employability. By introducing the B.A. in Engineering Technology program at UNLV, our intention is to become part of a broader movement among institutions dedicated to delivering accessible and applied engineering education. This program acknowledges and accommodates the diverse needs and aspirations of our student community, ensuring that opportunities for growth and development are extended to all who seek them.

B. Provide a list and description of institutionally approved expected student learning outcomes

The B.A. in Engineering Technology program at UNLV is designed to empower graduates with a comprehensive skill set and knowledge base, ensuring their readiness for dynamic and successful careers in the field of engineering technology. Upon graduation, students are expected to:

1. Apply fundamental engineering principles by working in laboratories, internships, or industry projects
2. Be able to solve engineering problems using a diverse set of scientific and mathematical concepts
3. Analyze the strengths and weaknesses of potential solutions to engineering problems
4. Select and use appropriate engineering tools and technologies in design and implementation projects
5. Communicate engineering concepts and solutions in written and oral formats
6. Collaborate in a team environment to complete complex engineering projects
7. Describe ethical considerations and professional responsibility in engineering practice.
8. Summarize the cultural, societal, and environmental factors that shape engineering projects and practices

C. Provide an institutionally approved plan for assessing student learning outcomes

See attached assessment plan.

D. Contribution and relationship of program objectives to

i. NSHE Master Plan / Strategic Goals

a. Access – *Increase participation in postsecondary education*

The program aims to augment postsecondary education participation by introducing flexible learning formats, particularly targeting underrepresented communities. This initiative serves as an alternative pathway for students who may not meet conventional admission criteria for traditional engineering and computer science programs. Annually, around 60 students face rejection from B.S. degrees in Engineering and Computer Science due to incomplete prerequisite coursework. The proposed program is designed to bridge this gap, offering a viable solution for these students to successfully attain their degrees. Through this approach, the program seeks to create a more inclusive and accessible avenue for individuals who aspire to pursue higher education in engineering and computer science.

b. Success – *Increase student success*

The proposed program is designed with a strong support system including advising, mentoring, tutoring, and career services to enhance student retention and graduation rates. Additionally, the curriculum is continuously reviewed to ensure relevance and effectiveness in promoting student success.

c. Close the Achievement Gap – *Close the achievement gap among underserved populations*

The proposed program focuses on equity by offering targeted support and resources for underserved populations, fostering an inclusive learning environment, and actively working to identify and eliminate barriers to success for these groups.

d. Workforce – *Collaboratively address the challenges of the workforce and industry education needs of Nevada*

The proposed program is aligned with Nevada's economic growth and diversification needs. Strong industry partnerships ensure curriculum relevance to current and emerging workforce needs, bolstered by internships and job placement support.

e. Research – *Co-develop solutions to the critical issues facing 21st century Nevada and raise the overall research profile*

The proposed program encourages research that addresses Nevada-specific issues, fostering faculty and student research, and promoting collaborations with industry and academia.

ii. Institutional mission and core themes

The proposed program champions academic excellence through a rigorous curriculum. It promotes community engagement and industry internship, connecting students with real-world challenges. A focus on diversity and inclusion ensures a nurturing academic environment for all students. The program fosters innovation and critical thinking, preparing students to excel in engineering. It contributes significantly to the Nevada and regional economic development by building a bigger and stronger engineering workforce.

iii. Campus strategic plan and/or academic master plan

The B.A. in Engineering Technology program aligns with UNLV's TopTier 2.0 initiative and the Howard R. Hughes College of Engineering Strategic Plan. It emphasizes innovation, student-centered learning, and community engagement, addressing emerging educational needs and fostering an inclusive learning environment in line with the academic master plan.

iv. Other programs in the institution

This program complements existing bachelor-level programs in Engineering and Computer Science within the Howard R. Hughes College of Engineering by sharing resources and expertise. It fosters collaboration, enriching the academic community and broadening the educational experiences for students. This collaborative approach enhances the overall quality and diversity of educational offerings at UNLV.

v. Other related programs in the System

The B.A. in Engineering Technology program enhances the NSHE by providing a unique pathway for students, particularly those who have completed AA degrees at community colleges like CSN, to further their education in engineering. This creates a more integrated educational system within Nevada, promoting seamless transitions between different levels of higher education and broadening the scope of engineering education across the state.

vi. If the program was not included in the NSHE Planning Report, please explain why.

The proposed program is on the Planning Report, under the name B.A. Engineering.

E. Evaluation of need for the program

i. The need for the program and the data that provides evidence of that need

The proposed B.A. in Engineering Technology program is meticulously crafted to address the distinctive requirements of engineering pathway students. Recent data highlights a compelling demand for such specialized programs:

Enrollment Trends: In both 2022 and 2023, more than 300 students gained admission to the engineering pathway program administered by the Academic Success Center. Projections indicate a sustained upward trajectory for the year 2024 and beyond.

Persistent Demand: The consistent rise in enrollments underscores an ongoing and substantial demand for a program that is attuned to the specific needs and aspirations of these students.

ii. Student population to be served

The proposed B.A. in Engineering Technology program is designed to serve a diverse student population:

1. Students with Diverse Academic Backgrounds: This B.A. in Engineering Technology will welcome individuals with varying levels of academic preparedness, particularly for those whose math proficiency falls below the pre-Calculus standard (Math 126).

2. Career Changers: It will be suitable for individuals who are considering a career change and have a strong interest in engineering, computer science, IT, and cybersecurity.

3. Non-Traditional Students: The proposed program will be open to non-traditional students who may have work or family commitments and require flexibility in their educational journey.

4. Students Seeking Alternative Pathways: It will cater to students who are looking for an alternative pathway to enter engineering-related fields, recognizing that not all students may follow the traditional route.

5. Veterans: The program will be inclusive of veterans who may be transitioning into civilian careers and have an interest in engineering, IT, or related fields.

iii. Procedures used in arriving at the decision to offer the program

The B.A. in Engineering Technology was conceptualized and developed through a collaborative and thorough decision-making process, led by the Howard R. Hughes College of Engineering's leadership team, and informed by various stakeholders. This proposed program is designed to meet the current and future needs of students and the engineering sector. Guidance from the Provost's office was instrumental in guiding the development and approval process of the program proposal before its submission to the UNLV Provost and NSHE Board of Regents for final approval.

The creation of the B.A. in Engineering Technology program was a meticulously crafted endeavor, guided by a strategic decision-making process orchestrated by the leadership team of the Howard R. Hughes College of Engineering. It commenced with a recognition of the imperative need to accommodate Engineering pathway students transitioning into the College, precipitating initial discussions among key stakeholders. These deliberations led to the collective approval to embark on the development of the program, underpinned by a profound acknowledgment of its potential to address the evolving educational landscape and industry demands.

Following this pivotal decision, an exhaustive needs assessment and market analysis were undertaken to meticulously delineate industry trends and ascertain the burgeoning workforce demands within applied engineering domains. Subsequently, consultations with industry luminaries and employers were engaged to glean invaluable insights into the requisite skills and knowledge

essential for program graduates, thereby ensuring alignment with industry exigencies. The arduous task of curriculum development ensued, spearheaded by a dedicated team of faculty members and administrators who meticulously crafted a program blueprint aligned with both industry benchmarks and educational standards. Iterative refinement ensued, guaranteeing the curriculum's depth, breadth, and relevance to meet the evolving needs of the field.

Integral to this process was the profound engagement of stakeholders spanning UNLV students, alumni, faculty, staff, and leaders from collaborating institutions. These interactions fostered a robust exchange of ideas and perspectives, enriching the program's development trajectory. Concurrently, a comprehensive feasibility study was conducted to meticulously assess resource requirements, enrollment potential, and financial implications. This rigorous analysis ensured the program's viability and sustainability in the long run. Ultimately, the culmination of these efforts marked the submission of the program proposal for final approval, underscoring its strategic alignment with the university's mission and the broader imperatives of the engineering education landscape.

iv. Organizational arrangements required within the institution to accommodate the program

The Howard R. Hughes College of Engineering has developed a comprehensive management structure to ensure the successful launch and sustained success of the B.A. in Engineering Technology program. This structure is designed to uphold and enhance the quality of educational offerings and support services, especially considering the anticipated large student enrollment. All needed positions have been requested via institutional processes and are either hired, or expected to be in place when the proposed program launches.

This organizational structure is strategically designed to offer robust support and specialized expertise across the B.A. in Engineering Technology program. It aims to foster an environment conducive to learning, innovation, and practical application, aligning with the program's objectives and the College of Engineering's broader mission.

v. The timetable, with dates, for implementation steps

The faculty voted to approve development of the program on 3/29/24. The pre-proposal was approved by the Office of the Executive Vice President and Provost on 4/5/24. If approved by the Board of Regents, admissions into the program will start in Spring/Summer 2025 and classes will begin in Fall 2025.

vi. If this or a similar program already exists within the System, what is the justification for this addition? Please describe the nature and extent of the consultation with other institutions that have similar programs.

No similar program exists in the system. The B.A. in Engineering Technology program equips graduates with a versatile skill set applicable across diverse fields, providing pathways to advanced degrees beyond traditional engineering and technology tracks. Graduates can pursue various programs such as MBA programs, utilizing their technical expertise and leadership skills for roles in management or entrepreneurship. Additionally, they may opt for Master's programs in Data Science and Cybersecurity, leveraging their analytical abilities to excel in the rapidly growing fields of data analytics and cybersecurity. This flexibility highlights the program's interdisciplinary nature, empowering graduates to pursue a wide range of career trajectories in response to evolving industry demands.

vii. Evidence of employment opportunities for graduates (state and national). Include information on institutional review of the need for the program based on data from the Nevada P-20 Workforce Research Data System and/or any other applicable sources.

Analysis from Nevada P-20 Workforce Research Data System:

This data highlights a significant demand for professionals in fields relevant to applied engineering and engineering technology. Notable findings include:

- a. **Civil Engineering:** An average of 191 graduates per year versus 362 job openings, indicating a 52.8% fulfillment rate.
- b. **Electrical and Electronics Engineering/Technicians:** An average of 48 graduates per year compared to 182 job openings, a fulfillment rate of 26.4%.
- c. **Industrial Engineering:** A critical gap with no graduates and 114 job openings annually.
- d. **Teaching in Technical Areas:** An average of 856 graduates against 2,260 job openings, a 37.9% fulfillment rate.

These statistics underscore the need for the B.A. in Engineering Technology program to address these employment gaps.

National Employment Trends:

Data from sources like the U.S. Bureau of Labor Statistics indicates a positive outlook for applied engineering fields, with projections showing significant job growth and emerging sectors. Factors influencing this growth include economic diversification efforts in Nevada, expansion of major tech companies, emergence of new tech sectors, hosting of large-scale tech events, increased military tech needs, and supportive government initiatives.

Institutional Review of Program Need:

An institutional review confirms the alignment of the B.A. in Engineering Technology program with workforce demands, highlighting its potential to fill employment gaps in both local and national contexts.

Industry Partnerships and Feedback:

Feedback from industry partners and employers emphasizes a strong demand for graduates equipped with the skills and knowledge provided by the program.

F. Detailed curriculum proposal

- i. **Representative course of study by year (options, courses to be used with/without modification; new courses to be developed)**

See attached.

- ii. **Program entrance requirements**

First-Year Students:

A minimum 3.0 GPA in 13 core units, comprising:

- a. 4 units in English.
- b. 3 units in Math.
- c. 3 units in Social Science.
- d. 3 units in Natural Science.

Alternatively, a score of 1120 on the SAT* (evidence-based reading & writing and math). For SAT exams taken prior to March 2016, a score of 1040 is required.

Or, a composite score of 22 on the ACT.

Or, possession of a Nevada Advanced High School Diploma or a Nevada College and Career Ready High School Diploma.

Transfer Students:

Adherence to UNLV's standard transfer student admission requirements.

International Students:

a. For First-Year International Students:

A 3.0 cumulative GPA or 1120* SAT (evidence-based reading & writing and math) or 22 ACT (composite score). *1040 for SAT exams taken prior to March 2016.

b. For international transfer students:

A minimum 2.5 GPA in 24 or more transferable college-level credits. Transfer students with fewer than 24 transferable college-level credits must meet the first-year student admission requirements.

iii. Program completion requirements (credit hours, grade point average; subject matter distribution, preprogram requirements)

Total Credit Hours Required for Graduation:

Students must complete between 120-122 credit hours to qualify for graduation.

Minimum GPA Requirement:

Students are required to maintain a minimum cumulative GPA of 2.0 throughout the duration of the program.

Distribution of Required Courses:

The program curriculum includes:

- (1) Core courses that cover fundamental concepts in applied engineering.
- (2) Electives that allow students to explore additional interests and supplement core knowledge.
- (3) Specialized courses focusing on specific areas within engineering technology, such as IT, Mechatronics, or Construction.

Each student must fulfill the prescribed number of credit hours in each category as defined by the program.

Preprogram Requirements:

Depending on the student's background, certain prerequisites may be required before commencing the program. This could include completion of foundational courses in mathematics, science, or technology.

Each student must fulfill the prescribed number of credit hours in each category as defined by the program.

Co-curricular Activities:

Participation in co-curricular activities, such as internships, workshops, or projects, may be required or strongly recommended to enhance practical learning and industry readiness.

iv. Accreditation consideration (organization (if any) which accredits program, requirements for accreditation, plan for attaining accreditation - include costs and time frame)

This program does not seek external accreditation.

v. For certificates only: Name of any state, national and/or industry recognized certification(s) or licensing examination(s) for which certificate prepares the student, if applicable

Not applicable

G. Method of Delivery (for the purpose of state authorization [NC-SARA])

**i. How will this academic program be delivered when the program begins?
(mark all that apply)**

☒ 100% face-to-face courses

☐ Hybrid (some online courses, some face-to-face courses)

☐ 100% online courses

ii. Learning Placements

Does the academic program have learning placements (e.g. internships, externships, clinical placements, student teaching, etc.) that *may take place outside the state of Nevada*?

☐ Yes

☒ No.

H. Institutional Review Process

i. Date of Faculty Review (may include additional information, as needed)

Several key review dates mark the evaluation process for the B.A. in Engineering Technology program. On December 1, 2023, the Faculty Advisory Committee conducted an initial review, providing valuable feedback. On February 1, 2024, the College of Engineering leadership team convened a special session during the Excom meeting to approve the program. Finally, on February 12, 2024, the Faculty Advisory Committee conducted a comprehensive follow-up review, ensuring alignment with academic standards and finalizing recommendations for program enhancement.

ii. Describe the process for review and approval by the appropriate academic policy body of the institution

The approval process for the B.A. in Engineering Technology program entails several key stages. Initially, the College of Engineering Leadership Team reviews and approves the program concept. Subsequently, a preproposal is assessed by the Engineering Advisory Committee and the Provost's Office. Upon preproposal approval, a full proposal is developed and submitted through Curriculog for verification. The proposal undergoes thorough reviews by the College's Curriculum Committee and the Faculty Senate before a final review by the Provost's Office. Finally, the proposal must gain approval from the NSHE Academic Affairs Council and the Board of Regents for official endorsement.

I. Readiness to begin program

i. List the educational and professional qualifications of the faculty relative to their individual teaching assignments

Terminal Degrees Requirement:

All faculty members teaching in the B.A. in Engineering Technology program are required to hold terminal degrees (a Ph.D. or equivalent) in their respective fields.

Relevant fields include Engineering, Computer Science, Mathematics, Physics, or closely related disciplines.

Expertise in Key Subject Areas:

Faculty members are expected to possess expertise and the ability to teach effectively in core areas pertinent to the program. These areas include:

- a. Mathematics: Proficiency in teaching a range of mathematical concepts that are foundational to engineering and applied sciences.
- b. Physics: Ability to instruct on principles of physics that are essential for understanding engineering processes and systems.
- c. Engineering: Expertise in various engineering disciplines, with the capacity to convey both theoretical and practical aspects.
- d. Information Technology (IT) and Computer Science: Skills in teaching IT and computer science courses, covering both foundational knowledge and applied skills.

Professional Experience:

In addition to academic qualifications, faculty members are expected to have relevant professional experience in their fields. This experience enhances their teaching by providing real-world perspectives and examples.

Commitment to Educational Excellence:

Faculty members should demonstrate a commitment to educational excellence, including staying updated with the latest developments in their fields, employing innovative teaching methods, and engaging in continuous professional development.

Interdisciplinary Teaching Approach:

Given the interdisciplinary nature of the B.A. in Engineering Technology program, faculty members are encouraged to integrate cross-disciplinary perspectives in their teaching to provide a comprehensive educational experience.

ii. List the anticipated sources or plans to secure qualified faculty and staff

Securing qualified faculty and staff is crucial for the success and credibility of the B.A. in Engineering Technology program. Currently, two faculty-in-residence (FIR) positions are approved and undergoing recruitment. Additionally, plans are in place to potentially hire four more FIR positions, an administrative assistant (AA), and a lab director to support the program's operations and academic needs. These recruitment efforts aim to assemble a dedicated team of professionals committed to delivering high-quality education and facilitating the program's growth and development.

iii. Contribution of new program to department's existing programs (both graduate and undergraduate) and contribution to existing programs throughout the college or university

The proposed B.A. in Engineering Technology program at UNLV indeed presents a multifaceted opportunity to enhance the university's educational offerings and student experience. This program not only aligns with current industry needs but also provides a flexible and practical educational pathway for a diverse range of students. This program can contribute to UNLV's mission and its students' success in the following ways:

1. Curricular Synergies and Learning Opportunities:

- **Complementing and Enhancing Existing Programs:** The integration of applied engineering into the curriculum serves to enhance the depth and breadth of existing engineering and computer science programs. This creates a more well-rounded educational experience, bridging the gap between theory and practical application.
- **Resource Utilization and Sharing:** The development of new labs and workshops will not only benefit B.A. students but also enhance the learning environment for B.S. students in Engineering and Computer Science. This shared resource model fosters a collaborative learning environment, encouraging students from various disciplines to work together.
- **Promoting Interdisciplinary Learning:** Encouraging students from business, MIS, and other disciplines to engage in engineering and IT courses fosters a culture of interdisciplinary collaboration and innovation.

2. Student Recruitment and Diversity:

- **Attracting a Broad Student Base:** The unique nature of the B.A. in Engineering Technology program enables UNLV to attract students with diverse interests and backgrounds. This diversity enriches the university's culture and promotes a more dynamic and inclusive educational environment.
- **Broadening Academic Options:** By offering a program that diverges from traditional engineering paths, UNLV caters to a wider spectrum of student interests and career goals. This broadened academic choice can be a key factor in attracting prospective students looking for a program that aligns more closely with their aspirations.

3. Alternative Academic Path and Personalized Education:

- **Accommodating Different Learning Styles:** Recognizing that students have different strengths and learning preferences, the B.A. in Engineering Technology provides an alternative to more math and theory-intensive B.S. programs. This inclusivity can help students find a path that resonates with their abilities and interests.
- **Reducing Attrition Rates:** Offering this alternative pathway can significantly lower dropout rates. By providing an option that aligns better with certain students' capabilities, UNLV ensures these students can still achieve their educational and professional goals.
- **Customizable Education Experience:** Allowing students to tailor their education to their strengths and career objectives leads to a more engaged and motivated student body. This personalization can result in better academic performance and more satisfying career outcomes.

iv. Recommendations from prior program review and/or accreditation review teams

In developing the B.A. in Engineering Technology, the Howard R. Hughes College of Engineering at UNLV has included many recommendations, suggestions, and ideas collected from reviews and accreditations of other B.S. in Engineering/Computer Science programs. These recommendations typically focus on areas such as curriculum development, institutional support, resources, and industry alignment. Here are the general types of recommendations that the Howard R. Hughes College of Engineering has found relevant and has considered for the B.A. in Engineering Technology program:

1. Curriculum Development:

- The Howard R. Hughes College of Engineering is ensuring that the curriculum is continuously updated to reflect the latest industry trends and technological advancements.
- The College is incorporating a balance of theoretical knowledge and practical skills, emphasizing hands-on learning experiences.
- It is developing interdisciplinary courses to foster a broad-based education and encourage collaboration across different fields of study.

2. Faculty Qualifications and Development:

- The College is focused on recruiting and retaining faculty with a mix of academic and industry experience to provide students with a well-rounded perspective.

3. Student Support Services:

- The College is enhancing career services to support students in internships, job placements, and career counseling.

4. Resources and Facilities:

- The College is investing in state-of-the-art laboratories, equipment, and learning resources to support the applied nature of the engineering program.

5. Industry Alignment and Partnerships:

- The College is set to strengthen relationships with industry partners for collaborative research, internship opportunities, and curriculum development.
- It is going to regularly consult with industry advisory boards to keep the program aligned with current and future workforce needs.

6. Assessment and Continuous Improvement:

- The College shall implement a robust system for assessing student learning outcomes and using the data to continuously improve the program.
- It is set to regularly review and update the B.A. in Engineering Technology program based on feedback from students, alumni, faculty, and industry partners.

7. Diversity and Inclusivity:

- The College shall focus on recruiting a diverse student body and faculty to enrich the learning environment.

J. Resource Analysis

i. Proposed source of funds (enrollment-generated state funds, reallocation of existing funds, grants, other state funds)

Enrollment-generated state funds and some reallocation of existing funds, including donor and self-supporting accounts in the college budget.

ii. Each new program approved must be reviewed for adequate full-time equivalent (FTE) to support the program in the fifth year. Indicate if enrollments represent 1) students formally admitted to the program, 2) declared majors in the program, or 3) course enrollments in the program.

a. (1) Full-time equivalent (FTE) enrollment in the Fall semester of the first, third, and fifth year.

1st Fall semester 160

3rd Fall semester 240

5th Fall semester 280

(2) Explain the methodology/assumptions used in determining projected FTE figures.

The projected FTE was determined using the formula documented in the NSHE Procedures and Guidelines Manual, Chapter 6, Section 2. FTE is computed by multiplying the number of students times the number of credits they will be taking (12) and then dividing that number by 15.

b. (1) Unduplicated headcount in the Fall semester of the first, third, and fifth year.

1st Fall semester 200

3rd Fall semester 300

5th Fall semester 350

(2) Explain the methodology/assumptions used in determining projected headcount figures.

The methodology utilized for projecting headcount figures for the B.A. in Engineering Technology program involves a meticulous analysis encompassing various facets of enrollment dynamics and attrition rates, which are crucial for understanding the program's trajectory and sustainability. Beginning with the initial cohort and enrollment figures, insights were gleaned from the robust interest displayed by students in the Engineering Pathway Program, indicating a promising influx into the proposed B.A. program upon its approval. This initial observation sets the stage for further analysis, guiding the formulation of projections regarding program enrollment.

Looking towards the future, enrollment projections were formulated based on consistent annual enrollment rates alongside varying attrition scenarios. These projections offer valuable insights into the potential growth trajectory of the program, allowing for informed planning and resource allocation to accommodate varying student populations effectively.

Finally, these projections carry significant implications for program management. They underscore the critical importance of implementing effective student retention strategies to ensure the long-term sustainability and success of the program. Overall, these projections serve as a guiding framework, enabling strategic decision-making to support the growth and development of the B.A. in Engineering Technology program in alignment with the college's objectives and student needs.

iii. Budget Projections – Complete and attach the Five-Year Program Cost Estimate and Resource Requirements Table.

See attached budget.

K. Facilities and equipment required

i. Existing facilities: type of space required, number of assignable square feet, space utilization assumptions, special requirements, modifications, effect on present programs

The utilization plan for existing facilities in support of the B.A. in Engineering Technology program at UNLV's College of Engineering is well-conceived, reflecting a strategic approach to resource management. This plan is approved by the Dean of the Howard R. Hughes College of Engineering. By strategically leveraging the current resources, the College is able to introduce the B.A. program without necessitating significant new investment in infrastructure up front. This

resource-efficient approach not only ensures the program's viability but also fosters a collaborative and interdisciplinary atmosphere, beneficial for both students and faculty. Here's a consolidated view of how these facilities will be effectively employed:

1. Classrooms:

- The program will predominantly utilize existing classrooms for lectures and theoretical instruction. Classrooms in the TBE, AEB, and nearby buildings, reserved through UNLV's Registrar's Office, will provide the traditional academic setting necessary for delivering lectures and facilitating discussions.

2. Laboratories:

- Laboratory spaces will be shared among various Engineering departments, including Civil Engineering, Mechanical Engineering, Computer Science, and Electrical Engineering. This arrangement not only maximizes the use of available resources but also promotes an interdisciplinary learning environment, aligning well with the diverse curriculum of the Engineering Technology program.

3. Workshop Spaces:

- For hands-on, project-based learning, the program will access the Mendenhall Machine Shop, Electronics Labs, and the AEB Maker Space. These venues are critical for providing practical experience and enabling students to engage in real-world project work, a key aspect of the Engineering Technology curriculum.

4. Faculty Offices and Meeting Rooms:

- Faculty associated with the B.A. in Engineering Technology program will be stationed in the TBE B building. Centralizing faculty offices in this location aids in efficient coordination and communication among staff members.
- Faculty will also have access to meeting rooms and administrative facilities in both the TBE and AEB buildings, ensuring adequate space for meetings, collaborations, and administrative activities.

ii. Additional facilities required: number of assignable square feet, description of space required, special requirements, time sequence assumed for securing required space

The utilization plan for existing facilities in support of the B.A. in Engineering Technology program at UNLV's College of Engineering demonstrates a strategic and resource-efficient approach approved by the Dean of the College of Engineering. By leveraging current resources effectively, the College can introduce the B.A. program without requiring substantial upfront investment in infrastructure. This approach not only ensures the program's viability but also cultivates a collaborative and interdisciplinary atmosphere beneficial for both students and faculty. The plan encompasses various key aspects:

1. Additional Space Required:

- **Dedicated Multi-Functional Lab:** A lab with approximately 2,000 square feet will be necessary to accommodate the increasing number of B.A. in Engineering Technology students, especially as more advanced 300- and 400-level courses are introduced in Year 3 and beyond. This lab should be versatile enough to support a variety of engineering, IT, and construction projects and activities.
- **Collaboration Spaces:** Additional areas designed for group work, mixer, and collaborative projects are essential. These spaces might include open areas, team project room, and informal meeting spots that encourage teamwork and idea sharing among students.

2. Special Requirements:

- **Equipment and Technology:** The program will require state-of-the-art equipment, software, and technology tailored to engineering and IT. This includes not only industry-standard tools and machinery but also advanced software for design, simulation, and analysis.
3. **Time Sequence for Securing Required Space:**
- **Short-term Needs:** In the initial phase, the program will make do with existing facilities while expansion plans are developed.
 - **Mid-term Planning:** Within the first few years, the focus will be on acquiring additional space or modifying existing spaces to meet the specific needs of the program. This phase is critical as the program begins to offer more complex and specialized courses.
 - **Long-term Expansion:** In the long term, there may be a need for new construction or significant remodeling of existing spaces to support the program's growth and the evolution of its requirements.

iii. Existing and additional equipment required

Whenever possible, the equipment available at the College of Engineering to support its various B.S. programs can be shared with the B.A. in Engineering Technology program to support the distinct needs of the program concerning courses in mechanical engineering, electrical engineering, IT, and construction. The strategic utilization and expansion of these resources not only align with the program's educational goals but also ensure that students are well-prepared for their future careers with relevant, hands-on experience in their respective fields. Continual assessment and updating of these equipment needs will be crucial to maintain the program's relevance and effectiveness.

L. Describe the adequacy and availability of library and information resources

Existing library resources are sufficient to meet the needs of the proposed program.

M. Student services

i. Describe the capacity of student support services to accommodate the program. Include a description of admissions, financial aid, advising, library, tutoring, and others specific to the program proposal

The Howard R. Hughes College of Engineering is committed to creating an inclusive, supportive, and enriching environment for all its students. This comprehensive support system is designed to ensure that B.A. in Engineering Technology students receive the necessary academic, professional, and personal support to thrive in their studies and future careers. Here's a detailed description of the planned student support services:

1. Academic Support:

- **Academic Advisors:** The program will utilize two dedicated academic advisors to assist students with course scheduling, academic planning, and goal setting.
- **Tutoring and Peer Tutoring:** A system of tutoring services, including peer tutoring, will be established for core engineering courses.
- **Supplemental Instruction (SI):** SI sessions will be offered for challenging courses to facilitate collaborative and effective group study sessions.
- **Study Groups and Workshops:** Development of study groups and workshops focusing on key skills such as study techniques and time management.

- **Access to Resources:** Students will have access to a range of academic resources, including textbooks, online materials, and software tools.
- **Social Media Platforms:** Utilization of platforms like Discord to encourage collaboration, communication, and community building among students.
- 2. **Career Development:**
 - **Resume Building and Job Search Support:** Services to assist in resume building, interview preparation, and job searching will be provided.
 - **Industry Insights:** Regular sessions with alumni and industry professionals to offer students insights into the professional world and networking opportunities.
- 3. **Personal Support:**
 - **Mentoring Program:** Implementation of a mentoring program pairing students with senior students or faculty mentors.
 - **Peer Support Network:** Development of peer support groups for students facing similar challenges or experiences.
 - **Wellness Programs:** Access to wellness programs and resources to support students' physical and mental well-being.
 - **Professional Memberships:** Facilitation of student memberships in relevant engineering societies and organizations.
- 4. **Outreach and Recruitment:**
 - **Marketing and Outreach Campaigns:** Development of marketing strategies to attract potential students to the program.
 - **Community Partnerships:** Forming partnerships with high schools and community colleges for early identification and recruitment of candidates.
- 5. **Collocation with B.S. in Engineering Programs:**
 - **Transfers:** Offering guidance and support for students interested in transferring to traditional B.S. in Engineering and Computer Science programs.
 - **Shared Courses:** Developing courses that can be taken by both B.S. and B.A. in Engineering Technology students, fostering an integrated learning environment.
 - **Space Allocation:** Ensuring lab and classroom spaces cater to the needs of B.A. in Engineering Technology students.
- 6. **Research and Development Opportunities:**
 - **Hands-on Projects:** Creation of tailored research and development opportunities for B.A. students to engage in practical, applied projects.
- 7. **Cultural and Diversity Initiatives:**
 - **Inclusivity Promotion:** Activities and programs to promote diversity and inclusivity within the program.
 - **Inclusive Curricula:** Ensuring that the curriculum reflects diverse perspectives and highlights contributions from engineers of various backgrounds.

ii. Describe the implications of the program for services to the rest of the student body

The initiation of the B.A. in Engineering Technology program is set to have a significant impact on the services offered to the entire student body, introducing both new opportunities and challenges that will need to be navigated. The implications of this new program encompass various aspects of university life and resources:

1. **Enhanced Interdisciplinary Opportunities:**
 - **Broader Learning Experience:** The introduction of new perspectives in the Engineering Technology program offers benefits to students in other disciplines and B.S. programs within the College of Engineering, broadening their academic exposure.

- **Collaborative Projects:** The program creates opportunities for collaborative projects across different departments, promoting an integrated and diverse campus community.
- 2. **Resource Allocation:**
 - **Shared Facilities:** The increased use of shared facilities like laboratories and workshops is expected. Effective scheduling and management will be essential to ensure equitable access for all students, especially given the rapid growth of B.S. programs within the College.
- 3. **Career and Professional Development:**
 - **Expanded Career Services:** New industry connections and internship opportunities associated with the Engineering Technology program can benefit the broader student body by enhancing the university's network.
 - **Diverse Job Opportunities:** The program's focus on applied skills may lead to an increase in on-campus recruitment events and job fairs, thereby offering more diverse opportunities to all students.
- 4. **Cultural and Diversity Initiatives:**
 - **Inclusive Environment:** Efforts within the Engineering Technology program to promote diversity and inclusivity can have a positive influence on campus culture, setting a precedent for other programs.
- 5. **Student Life and Extracurricular Activities:**
 - **New Clubs and Organizations:** The establishment of clubs or organizations related to Engineering Technology provides new extracurricular opportunities for all students.
 - **Inter-Departmental Events:** Engineering Technology program events and workshops could be open to all students, fostering a sense of community and shared learning.
- 6. **Research and Development:**
 - **Cross-Disciplinary Research:** The program could lead to research initiatives that involve students from various departments, promoting collaborative and interdisciplinary research.

N. Consultant Reports – If a consultant was hired to assist in the development of the program, please complete subsections A through C. A copy of the consultant’s final report must be on record at the requesting institution.

i. Names, qualifications and affiliations of consultant(s) used
Not Applicable.

ii. Consultant’s summary comments and recommendations
Not Applicable.

iii. Summary of proposer's response to consultants
Not Applicable.

O. Articulation Agreements

i. Articulation agreements were successfully completed with the following NSHE institutions. (Attach copies of agreements)

Articulation agreements have been successfully finalized with CSN (College of Southern Nevada), facilitating seamless academic pathways for students transferring into the B.A. in Engineering Technology program. These agreements ensure smooth credit transfer and academic continuity between institutions, enhancing accessibility and opportunities for students pursuing higher education in Engineering technology.

ii. Articulation agreements have not yet been established with the following NSHE institutions. (Indicate status)
Not Applicable.

iii. Articulation agreements are not applicable for the following institutions. (Indicate reasons)
Not Applicable.

P. Summary Statement

The Bachelor of Arts in Engineering Technology at UNLV's College of Engineering is a pioneering initiative, designed with the support and guidance of both the College of Engineering and the leadership at the Provost's Office. This program represents a strategic response to the evolving educational and workforce needs in Nevada, particularly targeting a diverse range of students, including non-traditional learners. By offering a curriculum that balances practical engineering applications with foundational principles in IT, mechatronics, and construction, the program provides a more accessible alternative to traditional engineering courses, which are often characterized by intensive mathematics and theory.

Central to the B.A. in Engineering Technology program is its emphasis on real-world, practical skills, preparing students for immediate entry into the workforce. This focus is not only in line with current industry demands but also enhances the employability of graduates, equipping them for various roles in engineering and related fields. The program also emphasizes diversity and inclusivity, ensuring comprehensive support services such as academic advising, career development, finance, and tutoring. These services are crucial for supporting students from all backgrounds, ensuring their academic success and professional readiness.

The development and operationalization of the program have been significantly bolstered by the strong guidance and support from the Dean of College of Engineering, Chairs of all the UNLV Engineering and Computer Science departments, and the strategic guidance from the Provost’s Office at UNLV. This collaborative effort underlines the program's alignment with UNLV’s broader mission and its

commitment to contributing effectively to Nevada's workforce development. State-of-the-art facilities and resources, including modern laboratories and extensive library materials, further underscore the program's readiness to provide a top-tier educational experience.

In closing, the B.A. in Engineering Technology at UNLV, with its considerable institutional support, stands as a significant addition to the university's academic portfolio. By bridging the gap between theoretical education and practical engineering application, it addresses the varied requirements of the modern student body and the dynamic workforce. This program is a testament to UNLV's commitment to fostering educational inclusivity and positioning itself as a key player in driving Nevada's economic and technological growth.

NEW PROGRAM PROPOSALS:
PROCESS FOR APPROVAL BY ACADEMIC AFFAIRS COUNCIL AND, IF REQUIRED,
THE NEVADA BOARD OF REGENTS
(October 2017)

Pursuant to Title 4, Chapter 14, Sections 7 and 8 of the Board of Regents *Handbook* and Chapter 6, Section 12 of the *NSHE Procedures and Guidelines Manual*, a new program, as proposed on this form, must be submitted by the NSHE institution for approval by the NSHE Academic Affairs Council. In addition, certain items must also be approved by the Board of Regents. The required approvals are specified below:

Program Proposals Requiring NSHE Academic Affairs Council (AAC) Approval Only

- Certificates 30 credit hours or more;
- Certificates of at least 9 and less than 30 credit hours that provide preparation necessary to take state, national and/or industry recognized certification or licensing examinations; and
- Study abroad programs.

Program Proposals Requiring NSHE Academic Affairs Council AND Nevada Board of Regents Approval:

- Degree, major or primary field of study for baccalaureate, master's, and doctoral level programs (BA, BS, MA, MS, PhD, and named degrees);
- Emphases, major or primary field of study within the Bachelor of Applied Science (BAS);
- Primary field of study within an Associate of Arts, an Associate of Science, and an Associate of Business (AA, AS, and AB);
- Primary field of study within an Associate of Applied Science (AAS); and
- Emphasis, concentration, or options that are converted into a major.

Note to Institutions: Following the required approval by the AAC and/or Nevada Board of Regents, institutions should determine whether the item requires submission to/approval by its accrediting organization (NWCCU) and take any necessary next steps with the accrediting organization.

Four-year study plan for BA in Engineering Technology

Year 1: Foundations

Semester 1:

(3 to 5 credits) Math 126E or Math 126E+26B
(3 credits) Introduction to Information Technology (EGG 121)
(3 credits) Programming Fundamentals (C++ or Python) (CS 135/ CS138)
(3 credits) General Education Course (English 101)
(3 credits) First-Year Seminar (Intro. to Engineering) (EGG 103)
15 to 17 Credits Total

Semester 2:

(3 credits) Introduction to Databases (EGG 122)
(3 credits) Web Development Basics (EGG 123)
(3 credits) Math 127
(3 credits) General Education Course (English 102)
(3 credits) General Education Course
15 Credits Total

Year 2: Core IT Skills

Semester 3:

(3 credits) Networking Fundamentals (EGG 124)
(3 credits) Introduction to Operating Systems (EGG 221)
(4 credits) General Education Course (Hist 100 or PSC 101)
(3 credits) General Education Course (Recommend COM 101)
(3 credits) Second Year Seminar
16 Credits Total

Semester 4:

(3 credits) Database Management Systems (EGG222)
(3 credits) Web Development (EGG 223)
(3 credits) IT Project Management (EGG 221)
(3 credits) Electives (technical) (e.g., CompTIA A+, CompTIA Network+, CompTIA Security+, Cisco Certified Network Associate (CCNA) certificate preparation)
(3 credits) General Education Course (Social Science/Double Dipper)
15 Credits Total

Year 3: Specializations and Practical Skills

Semester 5:

(3 credits) IT Security (EGG 322)
(3 credits) IT Support and Helpdesk (EGG 321)
(3 credits) Tech. Electives (e.g., Cisco Certified Network Associate (CCNA),

Certified Information Systems Security Professional (CISSP), Certified Ethical Hacker (CEH), preparation)
(3 credits) IT Internship or Industry Experience (EGG 497)
(3 credits) General Education Course (Humanities)
15 Credits Total

Semester 6:
(3 credits) Software Development (EGG 324)
(3 credits) Cloud Computing (EGG 323)
(3 credits) IT Ethics and Legal Issues (EGG 325)
(3 credits) Electives (e.g., Cisco Certified Network Associate (CCNA), Certified Information Systems Security Professional (CISSP), Certified Ethical Hacker (CEH), preparation)
(3 credits) IT Internship or Industry Experience (EGG 497)
15 Credits Total

Year 4: Advanced Topics and Capstone

Semester 7:
(3 credits) Advanced IT Security (EGG 422)
(3 credits) Advanced IT Project Management (EGG 421)
(3 credits) Electives (AWS Certified Solutions Architect – Associate, Project Management Professional (PMP), Linux Professional Institute Certification (LPIC-1), Certified ScrumMaster (CSM), Google Associate Cloud Engineer, etc.).
(3 credits) IT Internship or Industry Experience (EGG 497)
(3 credits) General Education Course (Fine Arts/Double Dipper)
15 Credits Total

Semester 8:
(3 credits) Advanced Topics in IT (e.g., Artificial Intelligence, Data Analytics, or IoT) (EGG 498)
(3 credits) Capstone Project (EGG 499)
(3 credits) Professional Development and Career Preparation (EGG 496)
(3 credits) General Education Course (Social Science)
(3 credits) Electives
15 Credits Total

Total 121 to 123 Credits

NSHE Academic Program Proposal - Five-Year Program Cost Estimate and Resource Requirements

Enter N/A if the information is not applicable to the program proposal

Program Resource Requirements. Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first, third and fifth fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Third and fifth year estimates should be in dollars adjusted for inflation. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Note: This form reflects the NWCCU's Substantive Change Budget Worksheet as of 8/28/17.

College/University: <u>University of Nevada, Las Vegas</u>				Program: <u>B.A. Engineering Technology</u>			
I. PLANNED STUDENT ENROLLMENT							
<i>Note: Enrollment numbers (A + B) for each fiscal year should match the FTE/Headcount numbers in the Academic Program Proposal Form (Sect. I.ii.).</i>		FY 1: FY ____		FY 3: FY ____		FY 5: FY ____	
		FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments to the Institution		160	150	240	300	280	350
B. Enrollments from Existing Programs			50		0		0
II. REVENUE							
		FY 1: FY <u>25</u>		FY 3: FY <u>27</u>		FY 5: FY <u>29</u>	
		On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request							
2. Institution Funds			\$22,425				
3. Federal (e.g. grant, appropriation)							
4. New Tuition Revenues (registration fee) from Increased Enrollments*		\$495,000		\$1,040,400		\$1,213,800	
5. Other Student Fees (diff fees for courses at 300-400 level)		\$0		\$54,000		\$64,800	
6. Other (i.e., Gifts)							
Total Revenue		\$495,000	\$22,425	\$1,094,400	\$0	\$1,278,600	\$0
<i>Note: Total Revenue (Section I) should match Total Expenditures (Section III)</i>							

NSHE Academic Program Proposal - Five-Year Program Cost Estimate and Resource Requirements

Enter N/A if the information is not applicable to the program proposal

III. EXPENDITURES		FY 1: FY ____		FY 3: FY ____		FY 5: FY ____	
		On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs							
1. FTE (Total FTE for all personnel types)		4.5	0	8.5	0	9	0
Faculty				0.5		1	
Adjunct Faculty		2.5		6		6	
Grad Assts							
Research Personnel		1		1		1	
Directors/Administrators							
Administrative Support Personnel		1		1		1	
Other: _____							
		Expenditures for personnel type below must reflect FTE levels in Section A.1.					
2. Faculty				\$62,500		\$134,000	
3. Adjunct Faculty		\$235,000		\$605,000		\$665,500	
4. Graduate Assistants							
5. Research Personnel		\$80,000		\$88,000		\$96,800	
6. Directors/Administrators							
7. Administrative Support Personnel		\$45,000		\$49,600		\$54,500	
8. Fringe Benefits		\$124,425		\$257,800		\$284,725	
9. Other:							
Total Personnel Costs		\$484,425	\$0	\$1,062,900	\$0	\$1,235,525	\$0

NSHE Academic Program Proposal - Five-Year Program Cost Estimate and Resource Requirements

Enter N/A if the information is not applicable to the program proposal

		FY 1: FY ____		FY 3: FY ____		FY 5: FY ____	
		On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures							
1. Travel		\$0		\$5,000		\$5,000	
2. Professional Services		\$0		\$2,000		\$2,000	
3. Other Services							
4. Communications		\$3,000		\$3,000		\$3,000	
5. Materials and Supplies		\$30,000		\$21,500		\$33,075	
6. Rentals							
7. Marketing materials and Advertising							
8. Miscellaneous							
Total Operating Expenditures		\$33,000	\$0	\$31,500	\$0	\$43,075	\$0

NSHE Academic Program Proposal - Five-Year Program Cost Estimate and Resource Requirements

Enter N/A if the information is not applicable to the program proposal

		FY 1: FY ____		FY 3: FY ____		FY 5: FY ____	
		On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay							
1. Library Resources							
2. Equipment							
Total Capital Outlay		\$0	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES (IIIA + IIIB + IIIC):		\$517,425	\$0	\$1,094,400	\$0	\$1,278,600	\$0
Note: Total Expenditures (Section IIIA-C total) should match Total Revenue (Section I)							

Budget Notes (optional):



TRANSFER PROGRAM

TRANSFER AGREEMENT: 2025-2026

University of Nevada Las Vegas Bachelor's Degree Program:

Bachelor of Arts – Engineering Technology

College of Southern Nevada Associate's Degree Program:

AS in Engineering Technology (MECHATRONICS TRACK)

CSN		Fall – 1st year	Total Credits: 16
Course	Prerequisite		Credits
ENG 100 OR 101 OR 110 OR 113 (C or better)	English Placement Test; or completion of ENG 098 with a grade of C- or better; or ESL 139 with a grade of C- or better		3
MATH181 (C or better)	MATH 126 and MATH 127 with a grade of C or better; or a satisfactory ACT/SAT/Placement Test score		4
EGG 101			3
FINE ARTS			3
COM 101			3

CSN		Spring – 1st year	Total Credits: 15
Course	Prerequisite		Credits
ENG 102 OR 114 (C or better)	ENG 100/101/101H/113 with a grade of C- or higher		3
NATURAL SCIENCE (PHYS151/L) (C or better)	C or better in MATH181		4
CADD 100			3
SOCIAL SCIENCE			3
CS 135 OR CS 138			3

CSN	Fall – 2nd year	Total Credits: 14
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Course	Prerequisite	Credits
HIST100 or PSC101		4
EGG 206		3
MT 102		3
ELECTIVE		3

CSN	Spring – 2nd year	Total Credits: 15
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Course	Prerequisite	Credits
ENG 231 OR 232 (Values & Diversity)	ENG 100 or 101 or 101H or 113 with a grade of C- or higher	3
MT 114		3
MT 115		3
MT 116		3
GENERAL ELECTIVES		3

Total Credits at CSN: 60

Multicultural and International requirements waived if CSN AA, AS, or AB is completed.

UNLV	Fall – 3rd year	Total Credits: 13
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Course	Prerequisite	Credits
PHYS 152A/L		4
EGG 111		3
EGG 210		3
SENSORS AND INSTRUMENTATION		3

UNLV	Spring –3rd year	Total Credits: 15
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Course	Prerequisite	Credits
CONTROL SYSTEMS		3
ROBOTICS PROGRAMMING		3

Course	Prerequisite	Credits
MECHATRONICS DESIGN		3
ELECTIVE		3
ELECTIVE		3

UNLV	Fall – 4th year	Total Credits:16
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Course	Prerequisite	Credits
MECHATRONIC SYSTEMS INTEGRATION		3
INDUSTRIAL AUTOMATION		3
MACHINE VISION		3
ELECTIVE		3
INTERNSHIP		3
CAPSTONE 1		1

UNLV	Spring – 4th year	Total Credits:17
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Course	Prerequisite	Credits
EMBEDDED SYSTEMS		3
INDUSTRIAL ROBOTICS		3
ELECTIVE		3
ELECTIVE		3
INTERNSHIP		3
CAPSTONE 2		2

Total Credits at UNLV:61

Degree Total: 121

Director's Note: Focus on math courses (and Physics for MEG, CEE, COE, and EE majors) because these classes move you forward in the major courses, where most general education classes just need to be completed by the time students graduate.

Program Specific Information: Grades of a C or higher must be earned in any English, Mathematics, Science, and Engineering courses. For more information on this program refer to <http://engineering.unlv.edu/>.

The Howard R. Hughes College of Engineering has a policy on the maximum number of attempts that are allowed to successfully complete a course in the undergraduate curriculum. Students are allowed a maximum of three attempts in an engineering, computer science or construction management course. Under this policy, the attempts include all attempts that result in a course grade of “A-F”, “AD”, “S/U”, “I” or “W”. The only exceptions to the repeat rule could include withdrawals for medical or military duties.

Transfer Policies:

REVISED 50/50 RULE

- The policy stating that UNLV will only accept up to 60 credits to be transferred and applied to any specific program/major is no longer in place. Unless a college/major has a specific requirement on credit limitations i.e., Lee Business School, College of Education, transfer credits from 2-year institutions should no longer be limited to 60 credits. At least 30 credits of upper division from UNLV are now required to obtain a Bachelor's.

REPEAT POLICY

- Students may retake a CSN course as often as needed to gain a better grade and, thereby, a higher grade point average. Only the highest grade received will count as part of the total CSN grade point average. All repeated courses taken at CSN will remain as part of a student's permanent academic record.

*PLEASE NOTE: While CSN accepts the BEST grade, UNLV accepts the LAST grade.

- To improve GPA and change the original grade the course must be repeated at the institution that it was completed. For example, if a student takes MATH 124 at CSN and receives an F the course must be repeated at CSN to replace the grade and improve the GPA.

REVERSE TRANSFER

- Students who have earned 15 or more credits at CSN and have transferred to a four-year institution without an associate's degree may “reverse transfer” the earned credits from the four-year institution to complete an associate's degree. This process makes it possible for students to earn an associate's degree as they continue to work toward completing their bachelor's degree.

NOTE: Some courses that fulfill specific general education requirements at CSN may fulfill different general education requirements at UNLV. Please see a UNLV/CSN Transfer Program Advisor to confirm your choices.

Revised on: 3/14/24



TRANSFER PROGRAM

TRANSFER AGREEMENT: 2025-2026

University of Nevada Las Vegas Bachelor's Degree Program:

Bachelor of Arts – Engineering Technology

College of Southern Nevada Associate's Degree Program:

AS in Engineering Technology (IT TRACK)

CSN		Fall – 1st year	Total Credits: 15
Course	Prerequisite	Credits	
ENG 100 OR 101 OR 110 OR 113 (C or better)	English Placement Test; or completion of ENG 098 with a grade of C- or better; or ESL 139 with a grade of C- or better	3	
MATH 127 (C or better)		3	
EGG 101		3	
FINE ARTS		3	
IS 101		3	

CSN		Spring – 1st year	Total Credits: 15
Course	Prerequisite	Credits	
ENG 102 OR 114 (C or better)	ENG 100/101/101H/113 with a grade of C- or higher	3	
EGG 131/L		3	
CS 135 OR CS 138		3	
SOCIAL SCIENCE		3	
CIT 112		3	

CSN	Fall – 2nd year	Total Credits: 16
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Course	Prerequisite	Credits
HIST100 or PSC101		4
COM 101		3
CIT 126		3
CIT 129		3
CIT 151		3

CSN	Spring – 2nd year	Total Credits: 15
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Course	Prerequisite	Credits
ENG 231 OR 232 (Values & Diversity)	ENG 100 or 101 or 101H or 113 with a grade of C- or higher	3
CIT 180		3
CIT 183		3
CIT 217		3
CIT 251		3

Total Credits at CSN: 61

Multicultural and International requirements waived if CSN AA, AS, or AB is completed.

UNLV	Fall – 3rd year	Total Credits: 15
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Course	Prerequisite	Credits
EGG 221		3
EGG 321		3
IT ELECTIVE		3
IT ELECTIVE		3
IT PROJECT MANAGEMENT		3

UNLV	Spring –3rd year	Total Credits: 15
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Course	Prerequisite	Credits
EGG 321		3

Course	Prerequisite	Credits
EGG 324		3
IT ETHICS/LEGAL ISSUES		3
IT ELECTIVE		3
IT INTERNSHIP		3

UNLV	Fall – 4th year	Total Credits:15
Course	Prerequisite	Credits
ADVANCED IT SECURITY		3
IT PROJECT MANAGEMENT (ADVANCED)		3
IT ELECTIVE		3
IT ELECTIVE		3
IT INTERNSHIP		3

UNLV	Spring – 4th year	Total Credits:15
Course	Prerequisite	Credits
ADVANCED TOPIC IN IT		3
IT CAPSTONE PROJECT		3
IT INTERNSHIP		3
IT ELECTIVE		3
PROFESSIONAL DEVELOPMENT		3

Total Credits at UNLV:60

Degree Total: 121

Director's Note: Focus on math courses (and Physics for MEG, CEE, COE, and EE majors) because these classes move you forward in the major courses, where most general education classes just need to be completed by the time students graduate.

Program Specific Information: Grades of a C or higher must be earned in any English, Mathematics, Science, and Engineering courses. For more information on this program refer to <http://engineering.unlv.edu/>.

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Revised on: 3/14/24



TRANSFER PROGRAM

TRANSFER AGREEMENT: 2025-2026

University of Nevada Las Vegas Bachelor's Degree Program:

Bachelor of Arts – Engineering Technology

College of Southern Nevada Associate's Degree Program:

AS in Engineering Technology (CONSTRUCTION TRACK)

CSN		Fall – 1st year	Total Credits: 16
Course	Prerequisite		Credits
ENG 100 OR 101 OR 110 OR 113 (C or better)	English Placement Test; or completion of ENG 098 with a grade of C- or better; or ESL 139 with a grade of C- or better		3
MATH181 (C or better)	MATH 126 and MATH 127 with a grade of C or better; or a satisfactory ACT/SAT/Placement Test score		4
EGG 101			3
FINE ARTS			3
COM 101			3

CSN		Spring – 1st year	Total Credits: 15
Course	Prerequisite		Credits
ENG 102 OR 114 (C or better)	ENG 100/101/101H/113 with a grade of C- or higher		3
CEE 121			2
NATURAL SCIENCE (PHYS151/L) (C or better)	C or better in MATH181		4
SOCIAL SCIENCE			3
CEM 100			3

CSN	Fall – 2nd year	Total Credits: 14
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Course	Prerequisite	Credits
HIST100 or PSC101		4
ADT 201		3
CEM 250		4
CONS 121		3

CSN	Spring – 2nd year	Total Credits: 16
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Course	Prerequisite	Credits
ENG 231 OR 232 (Values & Diversity)	ENG 100 or 101 or 101H or 113 with a grade of C- or higher	3
CONS 205		2
CONS 282		3
CONS 285		4
GENERAL ELECTIVES		4

Total Credits at CSN: 61

Multicultural and International requirements waived if CSN AA, AS, or AB is completed.

UNLV	Fall – 3rd year	Total Credits: 12
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Course	Prerequisite	Credits
EGG 114		3
EGG 230		3
EGG 232		3
EGG 234		3

UNLV	Spring –3rd year	Total Credits: 12
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Course	Prerequisite	Credits
EGG 331		3
EGG 333		3
EGG 436		3

Course	Prerequisite	Credits
CAD		3

UNLV		Fall – 4th year	Total Credits:
Course	Prerequisite		Credits

UNLV		Spring – 4th year	Total Credits:
Course	Prerequisite		Credits

Total Credits at UNLV:

Degree Total:

Director's Note: Focus on math courses (and Physics for MEG, CEE, COE, and EE majors) because these classes move you forward in the major courses, where most general education classes just need to be completed by the time students graduate.

Program Specific Information: Grades of a C or higher must be earned in any English, Mathematics, Science, and Engineering courses. For more information on this program refer to <http://engineering.unlv.edu/>.

The Howard R. Hughes College of Engineering has a policy on the maximum number of attempts that are allowed to successfully complete a course in the undergraduate curriculum. Students are allowed a maximum of three attempts in an engineering, computer science or construction management

course. Under this policy, the attempts include all attempts that result in a course grade of “A-F”, “AD”, “S/U”, “I” or “W”. The only exceptions to the repeat rule could include withdrawals for medical or military duties.

Transfer Policies:

REVISED 50/50 RULE

- The policy stating that UNLV will only accept up to 60 credits to be transferred and applied to any specific program/major is no longer in place. Unless a college/major has a specific requirement on credit limitations i.e., Lee Business School, College of Education, transfer credits from 2-year institutions should no longer be limited to 60 credits. At least 30 credits of upper division from UNLV are now required to obtain a Bachelor's.

REPEAT POLICY

- Students may retake a CSN course as often as needed to gain a better grade and, thereby, a higher grade point average. Only the highest grade received will count as part of the total CSN grade point average. All repeated courses taken at CSN will remain as part of a student's permanent academic record.

*PLEASE NOTE: While CSN accepts the BEST grade, UNLV accepts the LAST grade.

- To improve GPA and change the original grade the course must be repeated at the institution that it was completed. For example, if a student takes MATH 124 at CSN and receives an F the course must be repeated at CSN to replace the grade and improve the GPA.

REVERSE TRANSFER

- Students who have earned 15 or more credits at CSN and have transferred to a four-year institution without an associate's degree may “reverse transfer” the earned credits from the four-year institution to complete an associate's degree. This process makes it possible for students to earn an associate's degree as they continue to work toward completing their bachelor's degree.

NOTE: Some courses that fulfill specific general education requirements at CSN may fulfill different general education requirements at UNLV. Please see a UNLV/CSN Transfer Program Advisor to confirm your choices.

Revised on: 3/14/24

From: Dr. Rama Venkat, Dean of the College of Engineering, UNLV

To: UNLV Provost's Office, Board of Regents, and NSHE

Subject: Comprehensive Assessment of the BA in Engineering Technology Program

Date: 3/28/2024

Dear Esteemed Colleagues,

As the Dean of the Howard R. Hughes College of Engineering, I am pleased to present a comprehensive assessment of the BA in Engineering Technology program, focusing on its alignment with the College of Engineering's strategic plan and UNLV's Top Tier 2.0 initiative.

Strengths:

1. Leadership Support:

- Strong backing from the provost, the college, and all four engineering/computer science departmental levels underscores the program's potential for acceptance and growth.
- Acknowledged as a valuable program with positive responses from students and parents.

2. Innovative Curriculum:

- The program's curriculum is innovative, offering a unique blend of theoretical knowledge and extensive hands-on experiences.
- Specialized tracks cater to diverse student interests, including computer engineering and technology, electrical engineering and technology, mechanical engineering and technology, Information Technology, and cybersecurity.

3. Applied Learning Opportunities:

- Emphasis on practical applications through labs, internships, and real-world projects aligns with industry demands.
- Students gain valuable hands-on experience, enhancing their readiness for professional roles.

4. Flexibility and Student-Centric Approach:

- The program's flexibility accommodates a diverse student body, recognizing varied needs and aspirations.
- Commitment to advising and mentorship fosters a supportive environment, promoting student success.

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Priority within the College of Engineering's Strategic Plan:

1. Resource Enhancement:

- Prioritizing resource enhancement, including faculty development, technology upgrades, and specialized software/tools, is paramount for meeting program demands.

2. Curriculum Development and Update:

- Establishing a comprehensive curriculum is vital. Regular reviews and updates will ensure alignment with industry trends, maintaining the program's relevance and competitiveness.

Alignment with UNLV's Top Tier 2.0 Initiative:

1. Global Competitiveness:

- Strategic investment through differential fees aligns with UNLV's Top Tier 2.0 initiative, positioning graduates as competitive professionals locally and regionally.
- Initiatives to exceed basic educational standards contribute to UNLV's goal of global recognition.

2. Student Success and Support:

- Enhancing communication, transparency, and financial aid options align with UNLV's commitment to student success and support.
- These improvements contribute to a positive student experience, aligning with Top Tier goals.

In conclusion, while the BA in Engineering Technology program demonstrates notable strengths, addressing weaknesses and strategic priorities is crucial for its establishment, growth, and alignment with the College of Engineering's strategic plan and UNLV's Top Tier 2.0 initiative. The proposed resource enhancements and strategic initiatives outlined above will ensure the program's initial and sustained excellence and its contribution to the broader goals of our academic community.

Thank you for your attention to this matter. I am available to discuss any aspects of this assessment in further detail.

Sincerely,

Dr. Rama Venkat