

AISES COLLEGE AND CAREER GUIDE

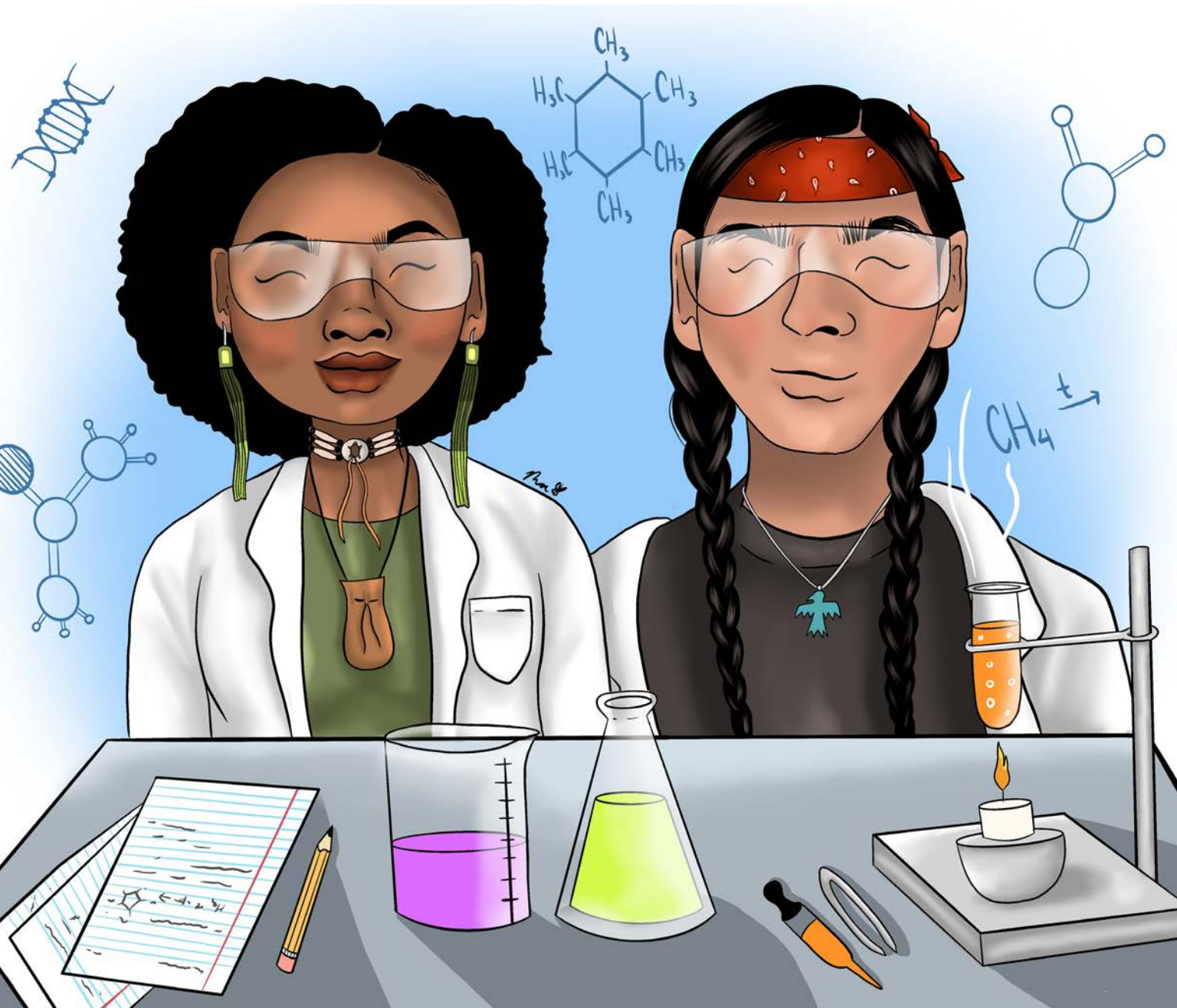


 **AISES**

NAVIGATIONAL TOOLS FOR STUDENT SUCCESS IN STEM

COLLEGE AND CAREER READINESS GUIDEBOOK

NAVIGATIONAL TOOLS FOR STUDENT SUCCESS IN STEM



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INTRODUCTION

Dear Students,

This College and Career Guide was handcrafted just for Native students like you to prepare for, and successfully navigate the pathways to various STEM college and career journeys. This guidebook includes wonderful insight from Native graduates, professionals, and other Indigenous STEM students to provide you with helpful tips and pertinent college advice so your paths will be made easier as you transition into your college and careers. Because your family, your tribal nation, and our communities need you, we hope this College and Career Readiness Guide provides you with insightful information that is a familiar and accessible way to navigate you in this stage of your life.

As our world becomes more advanced with technology and science, and our tribal nations continue to grow and flourish, our Indigenous students must understand how and why a STEM career can not only provide you an amazing career, but can also allow you to give back to your communities and our world.

Often, as Native students, we do not know of the possibilities that we can become because we rarely, if ever, see ourselves represented in STEM careers. We are often informed of the challenging coursework it takes to obtain a STEM degree. However, we are not told of the many amazing types of jobs that a STEM degree can prepare you for and how those jobs can benefit your communities. This guidebook is created to showcase these fields of work and also to showcase Native professionals that are working in the field of STEM and who are using their skills and knowledge in their careers. These professionals are using their STEM education to provide for their communities and help serve as role models for future generations like you.

As you read this guidebook, I hope you become aware of the many amazing STEM careers there are out there for you. I hope that you see yourself in the Indigenous professionals and college students in the guidebook and believe that you too, may one day become a role model for future generations of young people just like you. I hope you utilize the college and career readiness tools and tips to help you navigate your upcoming college journey; it will be difficult at times, but know that there are people, like your tribal communities and me, who are cheering for you. And, also know that your ancestors are always there for you too, and you carry with them all of their hopes and dreams for the future of our world. And most importantly, always remember that we are all connected, and you have the opportunity to make everything in our world better for all of us, for your children and their children. Good luck as you begin your journey to greatness!

Sincerely,



Dr. Johnny Poolaw
Delaware, Chiricahua Apache, Comanche, Kiowa
Director of Student Success



Dear Students,

Over the years I've met many brilliant Indigenous STEM (Science, Technology, Engineering, and Mathematics) professionals. Some have traveled to outer space, and some have stayed as close as their reservations — but they have a lot in common - They are all doing wonderful things in STEM fields to advance their communities and better our planet. And they all started out as curious, bright students like you. I imagine they were the ones who found math problems a fun challenge, who were intrigued by how cells look under a microscope, and who wanted to learn more about the health problems our people face so they could help their grandmas and grandpas get better. They were a lot like you.



Their path to becoming Indigenous STEM professionals almost certainly included years of struggle, countless discussions with mentors, and loving support from family and friends. Because this challenging journey does not come with a road map, AISES designed this *College and Career Guidebook* for Indigenous STEM students. Think of it as a navigational tool with helpful tips on selecting a college, writing a resume, finding a mentor, searching for scholarships, and much more. You can also use it to check out some STEM careers and the role they play in helping your community.

As Indigenous people, we come from a long line of scientists. Our ancestors were the first people on these lands to study our stars, our plants, our animal relatives, and so much more. Our ancestors loved our land, water, plants, and sky and fought hard battles so that we could continue our culture of caring for our Mother Earth. As contemporary Indigenous students and professionals, we must sustain our traditional culture so we can thrive as tribal people in our modern world.

Long ago, Indigenous people followed the stars on their journeys. I hope you use this book as a guiding star to help you along your Academic path. And as you go forward, remember the people you come from and all the wonderful Indigenous STEM role models you can look to for inspiration. You have the potential to touch the stars

You have the potential to touch the stars as our next Indigenous astronaut, find a cure for diabetes, or secure cyberspace. The sky is literally the limit.

as our next Indigenous astronaut, find a cure for diabetes, or secure cyberspace. The sky is literally the limit. Your ancestors, your family, and your community all want the best for you, and so do I.

Ta'Tura Tsiksu (With Much Respect),

Sarah EchoHawk
Pawnee Nation of Oklahoma
AISES Chief Executive Officer

Marshand Vasquez

*Wenatchi Band of the Colville Tribes and descended from the Yakama Nation
A senior in the Life Sciences program at Salish Kootenai College*



Brooke Thompson

Yurok and Karuk
Graduate student in Environmental Engineering
Stanford University



Danielle Arpan

Oglala Lakota
Nursing Student at South Dakota State University



Tsali Jacobs

Ojibwe, Oneida, Cherokee
Electrical Engineering and Finance Student
University of Oklahoma



McKalee Steen

Cherokee Nation
PhD Student at UC Berkeley



Adarius Begay

Colorado River Indian Tribe,
Kiowa, and Navajo
Engineering Student
University of Oklahoma



Mikaela David-John

St. Regis Mohawk
Graduate Student at
University of Florida



AISES Student Input

Throughout the College and Career Readiness Guidebook, you will come across supportive advice provided by current and former AISES Student Representatives. These exceptional Indigenous students were once high school students like you who started their STEM career journey in classrooms like yours. They understand what it means to be an Indigenous student in Math and Science classrooms in high school and college, and their advice and words of wisdom are included here for you to help guide you on your journey.

CAREER READINESS



UNDERSTANDING ONE'S CAREER PATH/PURPOSE



In figuring out what you want to do in your life, it can be challenging. What do I care about? What do I enjoy doing? What am I passionate about? It takes time to process your life and figure out what it all means. It can all seem overwhelming and frustrating at times, and that is okay. You will get through this!

Many professionals working today also did not know what their career paths were going to be. And this is okay. For some people, their career path was very linear. They took a direct route to get to where they are, but for many others, their career paths took many turns and sometimes dead ends until they found what they felt was their calling.

The truth is that you won't know what you enjoy until you try. This guidebook encourages you to see what is out there and explore paths that you think will be best for you. We provide four key guiding points to help you along in finding your career path: **Know** (self-learning about your strengths and your cultural identity); **Explore** (discovering careers in-depth and how they relate to your communities); **Plan** (the steps to take now in your journey); and **Do** (putting this all into action).



As you begin your career path, always know that you are not a failure if something does not work out or does not feel right along a pathway. There is something for you, but it may take some time and exploring to see what that is. As you go forward, think about what makes you tick. Think about your life so far and ask yourself what you find enjoyable. Perhaps you find fishing in the nearby creek fun, maybe you find tracking tornados exciting, or you love gaming and coding. All of these passions are excellent avenues to build towards a career path.

As you go forward in this guidebook, keep in mind that your journey is just that – a journey. You will go in many directions and will have many ups and downs, but you must keep going. This guidebook is here to help you recognize your interests and to help you see what career paths your passions and hobbies may be best suitable for pursuing.

Please use this guidebook as your tool for navigation. If and when you choose your path and start on your career journey, always know that you are exactly where you need to be. Your family and your entire community are so proud of you and support you every step of the way. Now, go be amazing!



KNOW

Understanding Your Strengths



As you set forth on your journey to your future, know that you are the starting point, and your future begins with you. You may know precisely where you want to be in the future, or you may have no idea, and that is fine! We all were unsure of our career path at one point in time, and many of us are still searching.

This guidebook will help you with that journey. We begin with an exploration of yourself and your interests, skills, and talents. The following questions are provided to help you figure out who you are and to help you better understand your strengths - what you are good at and what you are passionate about. You may not think you have any special traits or strengths, but you most definitely do!

Know Yourself - Who am I?

What are some things that challenge you?

What are some things that you do well?

If you could do any job for a day, what would it be?

What is your favorite class?

What do you like to do in your free time?

Who do you look up to and why?

What accomplishment are you most proud of?

Keep asking yourself questions like these as you go through this guidebook. You will start to see some important discoveries about yourself. Keep an open mind and let your interests lead you to a possible start on the career path that is right for you. You got this!



YOUR CONNECTION TO CULTURE AND STEM

As you begin to look at your strengths and discover what interests you and what you feel are your best talents, you should be empowered because you are a descendant of the first STEM experts. Your Indigenous ancestors were brilliant researchers, scientists, chemists, farmers, architects, and doctors long before our current professionals in these fields. You may not have been taught that they practiced ethnobotany through using plants for medicinal or artistic use or that Biology was present in the agronomy and agricultural techniques of Native people, most notably in the practice of planting corn, beans and squash next to each other. Technology can be found in how Native people used natural waterways to design and utilize irrigation canals for their farms many years ago. Engineering can be found (then and now) in the architecture of homes and ceremonial structures – the portable teepee or traditional Navajo hogan.

Math can be found in the traditional counting systems of Indigenous people through pictures or knots on a counting rope. Anatomy and physiology were (and still are) taught in the butchering of a deer, sheep, or buffalo. Astronomy and cosmology are also crucial to how Native people tell the changing of the seasons and forecast weather and are also used by Native Hawaiians to navigate across the oceans (Bitsoi and Lowe, 2018).

Although the Science and Math classes you are in now may seem like any other graduation requirement, it is essential to understand that this scientific and mathematic knowledge is something that has been in your family for generations, and like your ancestors who practiced these subjects - you too can follow along these same journeys and make a career out of these subjects.

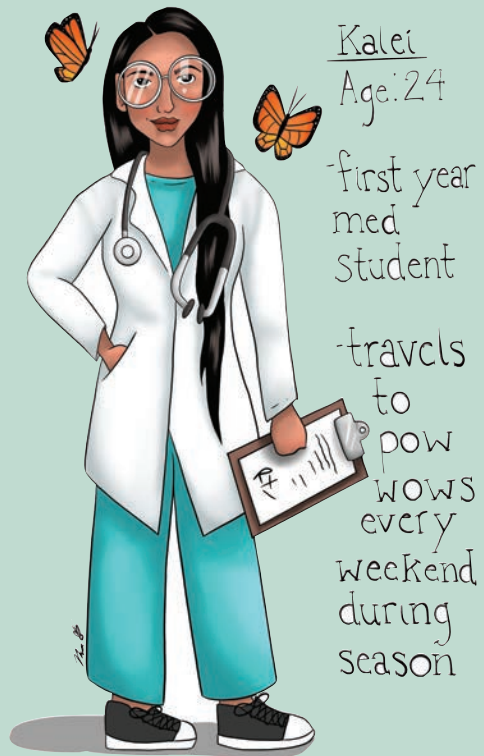
Although you may not have ever seen a Native American person as a scientist or engineer, this does not mean you cannot become one of those professionals one day. Although you

may not be taught Indigenous values and ways of understanding our lands in your AP Science courses, you do not have to give up your own Native American Identity to pursue a career in STEM. Be proud of who you are and where you come from - you possess a unique perspective in the world of STEM. You need to remember that your ancestors were always scientists and researchers in this world. Your unique perspective and ways of knowing, understanding, and protecting our earth are needed in the STEM world. You can directly contribute to strategies and ideas that can help better the Indigenous communities you come from. This is known as tribal nation-building, and we will discuss this in the next section.

"Our unique young people are so special and were placed on this earth for a purpose. The process of walking your life journeys will bring change, like the pandemic, that will draw on every bit of knowledge you bring. The traditional knowledge you carry is within, and you can draw upon it."



Dr. Henrietta Mann
AISES Council of Elders Emerita



Kalei
Age: 24
-first year med student
-travels to pow wows every weekend during season

TRIBAL NATION BUILDING

Giving back to your community through STEM

As Native people, one of our most important values is reciprocity - to give back. Many Indigenous professionals who have completed their academic journeys to work in the STEM field felt the need to give back to the communities where they come from. Reciprocity or giving back to your community not only means recognizing where you are from, but it also means contributing to something far greater than you. It means taking care of people and the community and is one of our traditional values.

Many Indigenous STEM degree graduates often report going back to their reservations or tribal lands with the skills and knowledge they received in college to help support and develop the tribal communities. This is what is referred to as "Tribal Nation Building". A significant aspect of tribal nation building focuses on the nation's well-being and communities as a whole rather than the individual. In Tribal nation building, the desire and motivation to serve others is more important than serving individual motivations and interests (Brayboy et al., 2014).

Tribal Nation Building (Brayboy, Castagno, and Solyom, 2014) has as its core purpose, capacity, and community building along with the goals of solid Nations and

"We have a duty to our families and communities to help. We're going to be the ones to change things and to make change."

Danielle Arpan

citizens. An important point to remember about Tribal nation building is that its primary goal is to create strong nations with strong Indigenous citizens. This is something that you need to remember as you go forward in your career journey. It is vital across Indian Country for tribal communities to develop their STEM workforces so that they can internally meet their own community's needs. A career in the STEM field can significantly impact our world, especially in the tribal communities where you live.

In the next section of the guidebook, you will be able to explore many STEM careers. This section was created especially for students to see all of the careers that the world of STEM has and how those careers can be tied to your community. You will be introduced to several Native American STEM professionals and will be shown what a chemical engineer does, see how important a forensic chemist is, learn what a biologist does, and will learn many more details of careers you probably have never heard of. As you explore these careers, keep in mind that you have everything it takes to become a professional in any one of these fields. One day, you may also serve a role in your communities and give back to support your people.

Marshand Vasquez: "Indian Country needs us to give back and protect our resources that we've had here. You can take care of the land, the water, you can take care of the air, you can take care of our people. Whatever it is just stick with it, go for it, and accomplish it, and do what you can to make a better life for ourselves. We are often forgotten and it's up to us to make it happen. All the resources are there for us to make it happen. We just gotta do it. Just keep sticking with it and your goals- they're not crazy unless you throw them to the side."

Danielle Arpan: "We have a duty to our families and communities to help. We're going to be the ones to change things and to make change."

Indian Country needs us to give back and protect our resources that we've had here. You can take care of the land, the water, you can take care of the air, you can take care of our people.

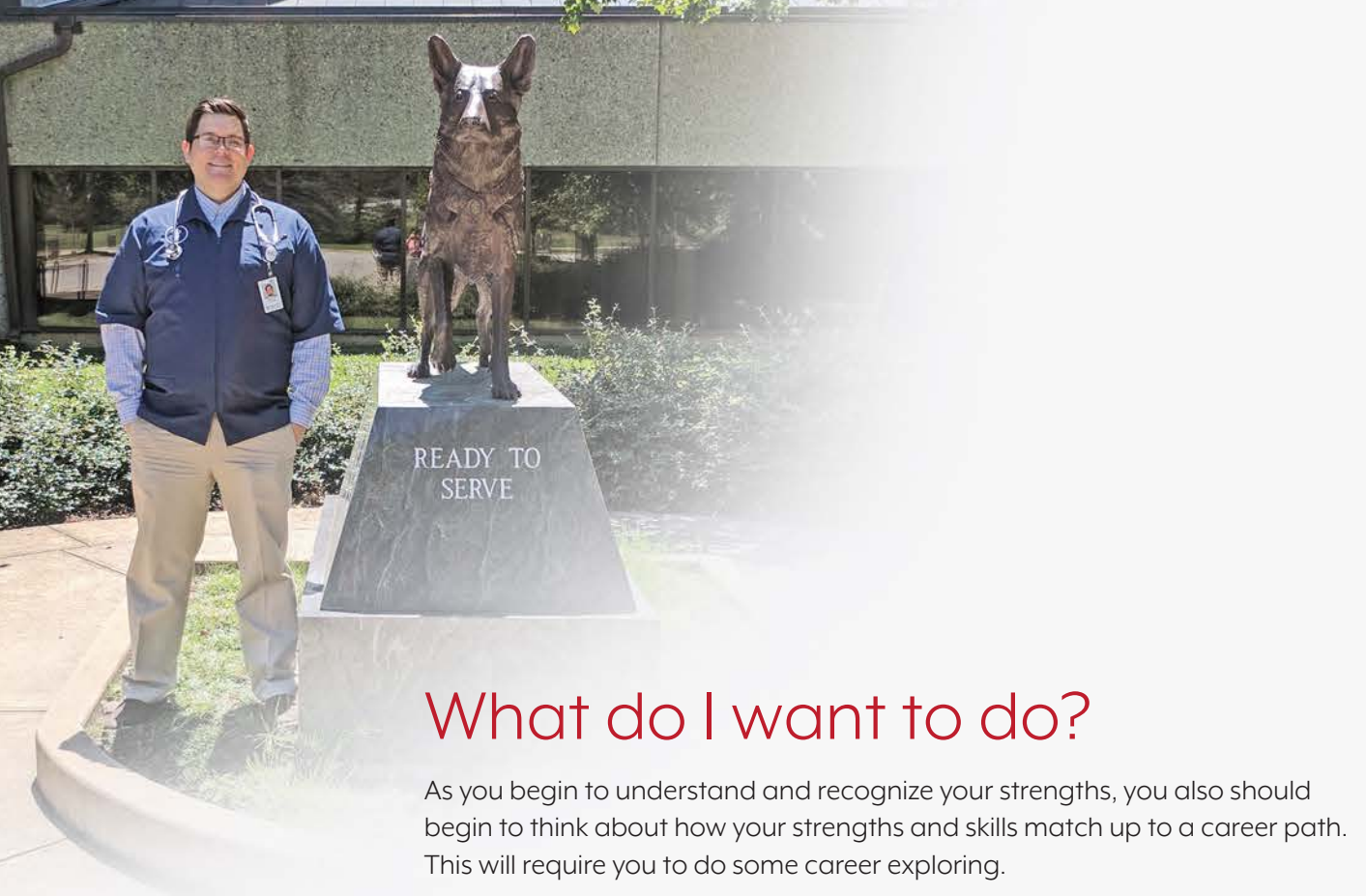
Marshand Vasquez



Kalei
Age: 24
champion jungle dress dancer
-works in her community with traditional medicines

EXPLORE





What do I want to do?

As you begin to understand and recognize your strengths, you also should begin to think about how your strengths and skills match up to a career path. This will require you to do some career exploring.

What Is Career Exploration?

- Reflecting on your own interests, strengths, skills, values, and preferences.
- Learning about fields of study, industries, and specific occupations. This process includes understanding things like:
 - Attributes of careers, i.e. core tasks involved, average salary, working conditions, etc.
 - What kind of qualifications/degrees one might need to achieve each job, i.e. certificates, degrees, experience, etc.
 - How some careers connect to others, i.e. an engineer could also get a position as a project manager, salesperson, technician, recruiter, etc.

There are many careers in our world, so the possibilities are almost endless, but as you set out to explore, try to connect the dots between your strengths and what you are learning in school, with a career. Some careers may sound (and be) perfect for you, while others may not fit with your strengths at all- this is all okay and is a part of exploring career fields.

Choosing a career path does not happen overnight. For many people, selecting the right career path took years of trial and error that included many jobs along their journey that were not the right fit. This is all okay too. We know there is not one perfect way to pinpoint your career path, but this guidebook is designed to help you navigate your way there with as much information and guidance as possible. Ultimately, we hope that as you go forward, you gain confidence in your strengths, grasp a stronger sense of your purpose, and that you have a better understanding of a pathway and navigational plan to a career that is especially suited to you.

These are some important tips to help you explore career options:

- Identify subject areas that you enjoy and match those to potential careers.
- Research (Google) careers that match your interests and strengths. YouTube has excellent videos that show career paths.
- Seek out ways your career path can help support and build your community?
- Take a personality quiz online to determine what career field might be best for you.
- Check out career assessment tools to see what careers best fit you based on your personality and skills.
- Explore the STEM Career Exploration Page on the AISES College and Career Website.





WHY DID YOU CHOOSE A STEM CAREER PATHWAY?

McKalee Steen: “There’s a breadth of opportunities with STEM. I’ve always been very passionate about the environment and environmental issues. I think finding whatever your passions are, there is a way to incorporate those into STEM, or using that as a jumping-off point for your STEM Career.”

Marshand Vasquez: “We don’t have that many [Native Americans] in health care. That’s what really led me to the Health Care field. I didn’t have that path initially, but I identified something that we definitely needed. I found something that I knew I could provide change and have somewhat of an impact on and that led me to STEM.”

I wanted to help my people.

Danielle Arpan

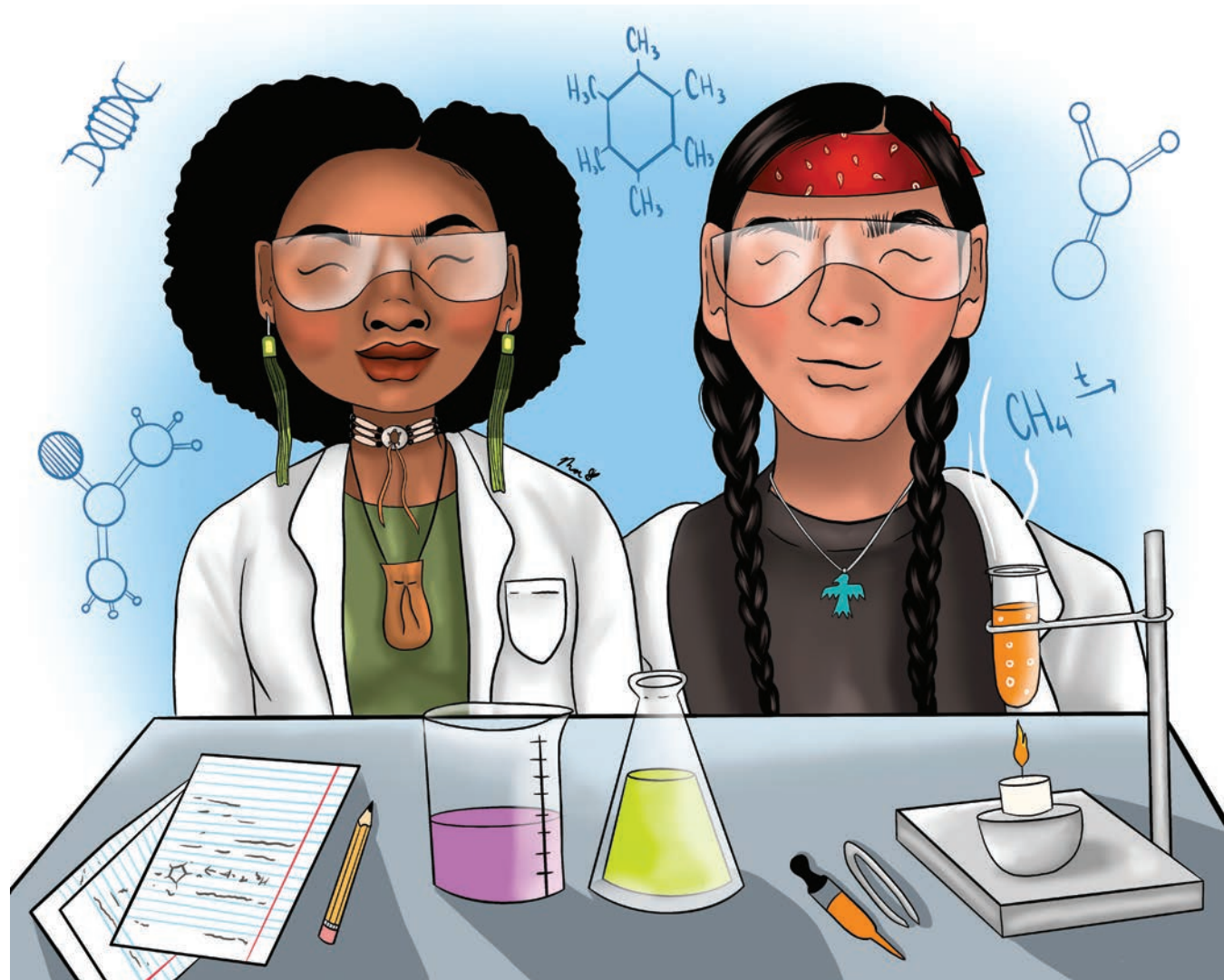


UNDERSTANDING STEM CAREER PATHS and OPPORTUNITIES

To make it easier for you on your journey to determine a career pathway, this guidebook describes several STEM careers that include ways to use these careers to support and build your tribal communities after you obtain your degree. Many paths here are worth exploring, and this includes many you may not have ever heard about or ever considered. So take your time and explore all there is in the STEM fields because all of these pathways would make an excellent career. Each one has the potential to bring so much to you and your tribal communities.

Students who study the sciences will typically earn a bachelor of science (BS), master’s, or doctoral degrees. You may also find colleges that offer bachelor of arts (BA) degrees in the sciences. A BS will be a more rigorous degree when it comes to coverage of math and science. A BA degree will often have more breadth in the social sciences and humanities. You will see BA degrees in the sciences at liberal arts colleges more frequently than at larger research universities.



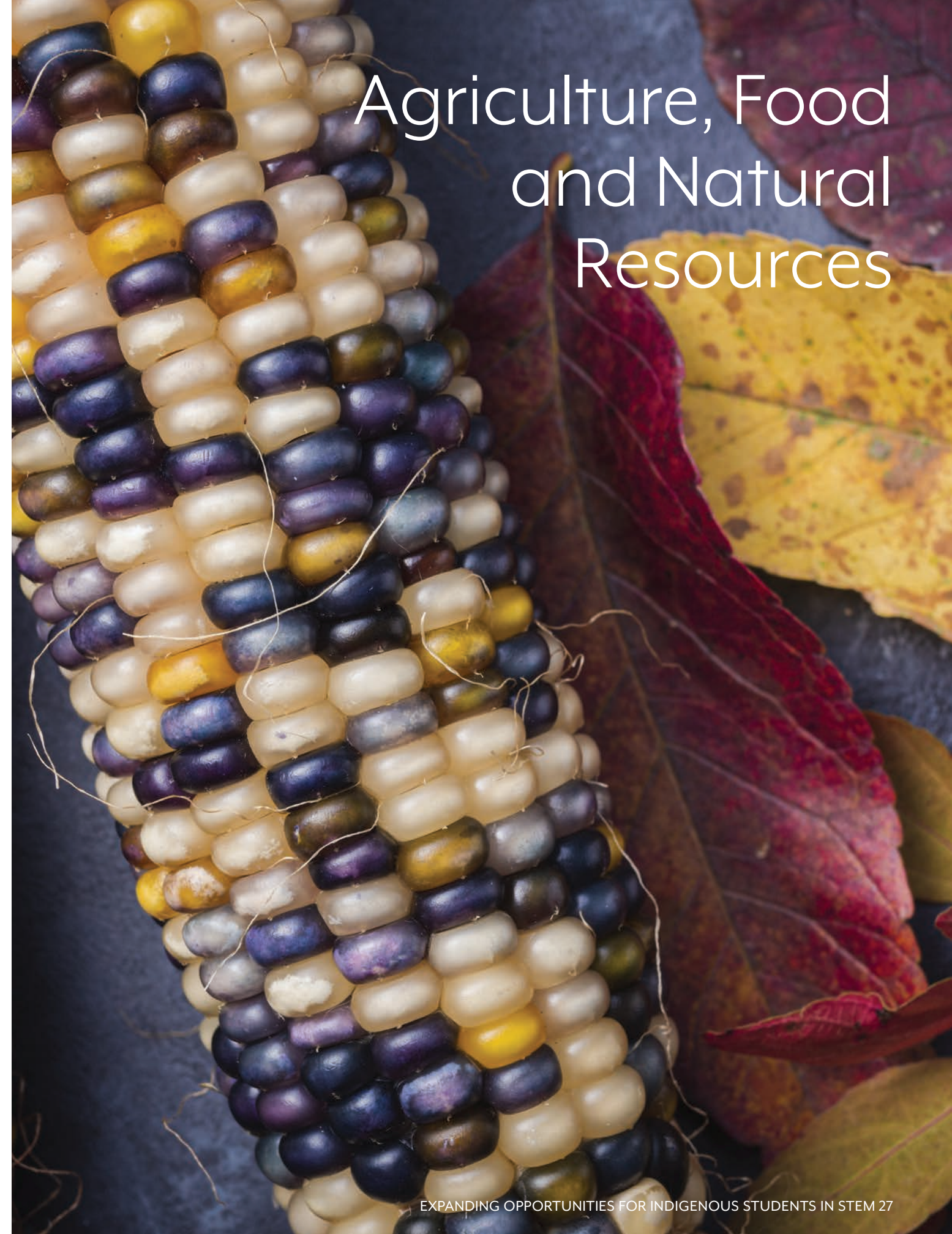


Agriculture, Food and Natural Resources

A survey of colleges and universities will reveal hundreds of different options for the sciences. However, most fall within a handful of categories:

- **Agriculture**
- **Food and Natural Resources**
- **Architecture and Construction**
- **Health Sciences**
- **Information Technology**
- **Science**
- **Technology**
- **Engineering**
- **Mathematics**
- **Energy**

For each of these categories, we provide an example of an actual job within that category, including a description of what each professional does in those jobs. We also include a description of how the job can be tied to your tribal community for Nation Building. As you explore the careers here, please think not only about how they relate to your strengths, but also think about how your tribal communities would benefit if you were to have one of these positions.



Agricultural Engineer

What they do:

Applies knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products.

A Person in This Career:

- Prepares reports, sketches, working drawings, specifications, proposals, and budgets for proposed sites or systems.
- Discuss plans with clients, contractors, consultants, and other engineers to evaluate and make necessary changes.
- Meets with clients, such as district or regional councils, farmers, and developers, to discuss their needs.
- Provides advice on water quality and issues related to pollution management, river control, and ground and surface water resources.
- Plans and directs construction of rural electric-power distribution systems and irrigation, drainage, and flood control systems for soil and water conservation.
- Designs agricultural machinery components and equipment using computer-aided design (CAD) technology.
- Tests agricultural machinery and equipment to ensure adequate performance.
- Designs food processing plants and related mechanical systems.
- Visits sites to observe environmental problems, consult with contractors, or monitor construction activities.
- Designs structures for crop storage, animal shelter and loading, animal and crop processing, and supervising their construction.

How can I use this type of career to help my community?

- Design Indigenous food systems on tribal lands to support and provide vegetables and fruits for the community.
- Provide oversight on the care and environmental issues on your tribal lands for the care and protection of the community.
- Design structures for animals that are used for traditional needs to be used for animal processing and distribution.

Environmental Engineer

What they do:

Researches, designs, plans, or performs engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

A person in this career:

- Designs or supervises the design of systems, processes, or equipment for control, management, or remediation of water, air, or soil quality.
- Collaborates with environmental scientists, planners, hazardous-waste technicians, engineers, experts in law or business, or other specialists to address environmental problems.
- Advises corporations or government agencies on procedures to clean up contaminated sites to protect people and the environment.
- Obtains, updates, or maintains plans, permits, or standard operating procedures.
- Serves as liaison with federal, state, or local agencies, or officials on solid or hazardous waste program requirements issues.
- Provides technical support for environmental remediation or litigation projects, including remediation system design or determination of regulatory applicability.
- Prepares, reviews, or updates environmental investigation or recommendation reports.
- Develops site-specific health and safety protocols, such as spill contingency plans or methods for loading or transporting waste.
- Inspects industrial or municipal facilities or programs to evaluate operational effectiveness, or ensure compliance with environmental regulations.
- Assists with the planning, quality assurance, safety inspection protocols, or sampling as part of a team conducting multimedia inspections at complex facilities.

How can I use this type of career to help my community?

- Manage the water, air, or soil quality for your tribal lands
- Serve as the tribal liaison with federal, state, or local agencies on issues on your tribal lands
- Collaborate with environmental specialists to address environmental problems for your Indigenous community.

Forester

What they do:

Manages public and private forested lands for economic, recreational, and conservation purposes. May inventory the type, amount, and location of standing timber, appraise the timber's worth, negotiate the purchase, and draw up procurement contracts. May determine how to conserve wildlife habitats, creek beds, water quality, soil stability, and how best to comply with environmental regulations. May devise plans for planting and growing new trees, monitoring trees for healthy growth, and determining optimal harvesting schedules.

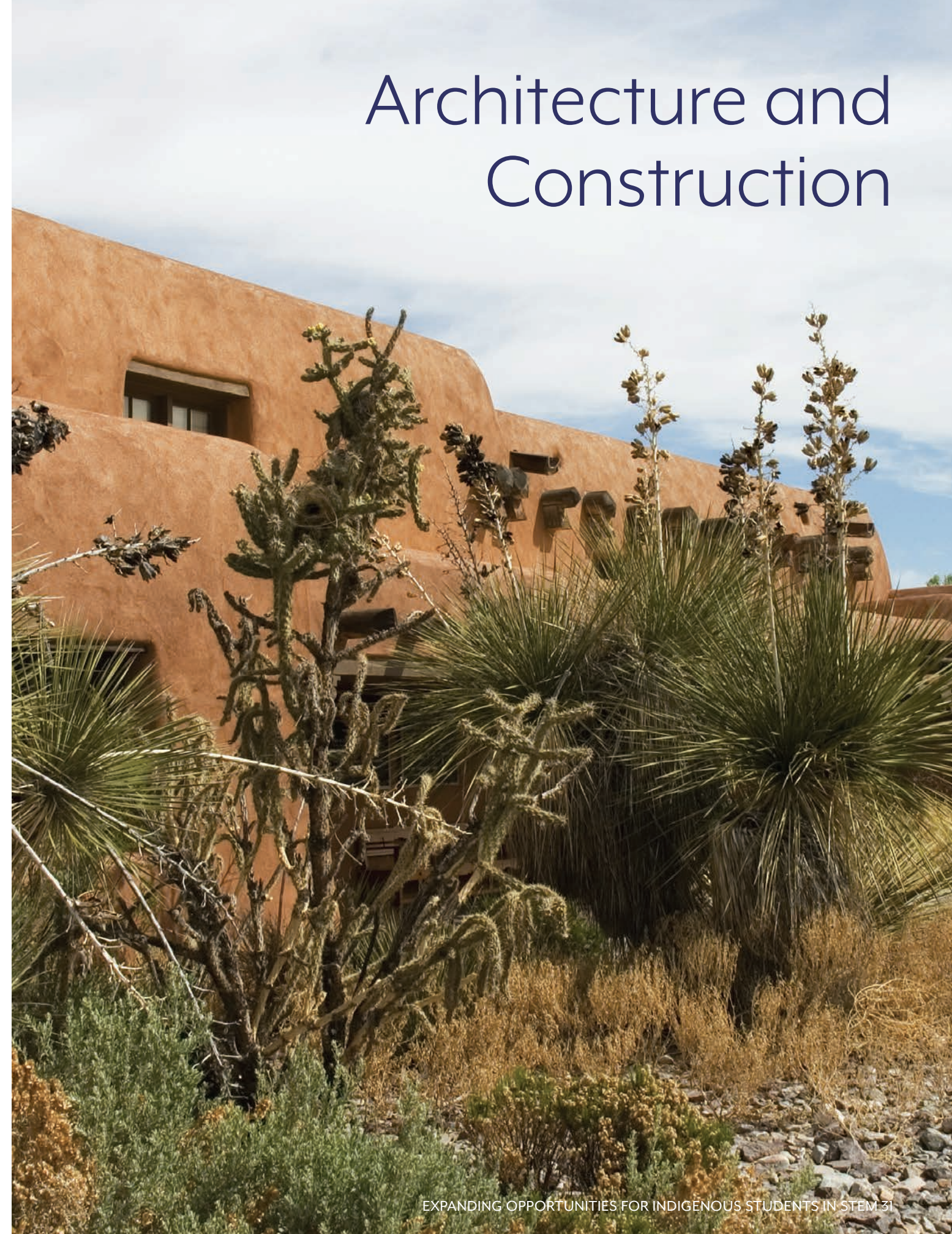
A person in this career:

- Monitors contract compliance and results of forestry activities to assure adherence to government regulations.
- Plans and supervises forestry projects, such as determining the type, number, and placement of trees to be planted, managing tree nurseries, thinning forests, and monitoring growth of new seedlings.
- Establishes short-and long-term plans for management of forest lands and forest resources.
- Determines methods of cutting and removing timber with minimum waste and environmental damage.
- Supervises activities of other forestry workers.
- Performs inspections of forests or forest nurseries.
- Plans and directs forest surveys and related studies and prepares reports and recommendations.
- Directs, and participates in, forest fire suppression.
- Chooses and prepares sites for new trees, using controlled burning, bulldozers, or herbicides to clear weeds, brush, and logging debris.
- Procures timber from private landowners.

How can I use this type of career to help my community?

- Protect the forests on your tribal lands.
- Manage the forests for economic growth and development for your tribal community.

Architecture and Construction



Architect

What they do: Plans and designs structures, such as private residences, office buildings, theaters, factories, and other structural property.

A person in this career:

- Prepares scale drawings or architectural designs using computer-aided design or other tools.
- Plans or designs structures such as residences, office buildings, theatres, factories, or other structural properties in accordance with environmental, safety, or other regulations.
- Directs activities of technicians engaged in preparing drawings or specification documents.
- Prepares contract documents for building contractors.
- Prepares information regarding design, structure specifications, materials, color, equipment, estimated costs, or construction time.
- Meets with clients to review or discuss architectural drawings.
- Integrates engineering elements into unified architectural designs.
- Administers construction contracts.
- Consults with clients to determine functional or spatial requirements of structures.
- Develops marketing materials, proposals, or presentations to generate new work opportunities.

How can I use this type of career to help my community?

- Design structures and buildings for your tribal nation headquarters, casinos, entertainment venues, education and health buildings, and museums.
- Implement traditional colors, shapes, and design into your buildings.
- Design and create important tribal buildings for housing, elder facilities, centers for tribal gatherings, gyms, and ceremonies.

Health Sciences



Biomedical Engineer

What they do:

Applies knowledge of engineering, biology, and biomechanical principles to the design, development, and evaluation of biological and health systems and products, such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems.

A person in this career:

- Designs and develops medical diagnostic and clinical instrumentation, equipment, and procedures, using the principles of engineering and biobehavioral sciences.
- Conducts research, along with life scientists, chemists, and medical scientists, on the engineering aspects of the biological systems of humans and animals.
- Manages teams of engineers by creating schedules, tracking inventory, creating and using budgets, and overseeing contract obligations and deadlines.
- Adapts or designs computer hardware or software for medical science uses.
- Evaluates the safety, efficiency, and effectiveness of biomedical equipment.
- Teaches biomedical engineering or disseminates knowledge about the field through writing or consulting.
- Develops models or computer simulations of human biobehavioral systems to obtain data for measuring or controlling life processes.
- Diagnoses and interprets bioelectric data using signal processing techniques.
- Designs and delivers technology to assist people with disabilities.
- Researches new materials to be used for products, such as implanted artificial organs.

How can I use this type of career to help my community?

- Provide design and support for equipment and tools that can help your community faced with diabetes and other health issues that affect Native Americans.
- Conduct research on Native Americans in your communities, as these communities are often overlooked and ignored.
- Design software for medical science uses that specifically affect Native Americans and their health issues.

Pharmacist

What they do:

Dispenses drugs prescribed by physicians and other health practitioners and provides information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.



Audrey Poolaw
Pharmacist

A person in this career:

- Reviews prescriptions to assure accuracy, ascertain the needed ingredients, and evaluate their suitability.
- Provides information and advice regarding drug interactions, side effects, dosage, and proper medication storage.
- Maintains records, such as pharmacy files, patient profiles, charge system files, inventories, control records for radioactive nuclei, or registries of poisons, narcotics, or controlled drugs.
- Plans, implements, or maintains procedures for mixing, packaging, or labeling pharmaceuticals, according to policy and legal requirements, to ensure quality, security, and proper disposal.
- Assesses the identity, strength, or purity of medications.
- Collaborates with other health care professionals to plan, monitor, review, or evaluate the quality or effectiveness of drugs or drug regimens, providing advice on drug applications or characteristics.
- Orders and purchases pharmaceutical supplies, medical supplies, or drugs, maintaining stock and storing and handling it properly.
- Analyzes prescribing trends to monitor patient compliance and to prevent excessive usage or harmful interactions.
- Advises customers on the selection of medication brands, medical equipment, or healthcare supplies.
- Compounds and dispenses medications as prescribed by doctors and dentists by calculating, weighing, measuring, and mixing ingredients or oversee these activities.

How can I use this type of career to help my community?

- Advise tribal community members on medication in a relational way that keeps in line with your Indigenous identity and place connections.
- Serve as a pharmacist for your tribal health center and provide direct care and service to your tribal community.

INFORMATION TECHNOLOGY



Computer Systems Engineer

What they do:

Designs and develops solutions to complex application problems, system administration issues, or network concerns. Performs systems management and integration functions.

A person in this career:

- Verifies stability, interoperability, portability, security, or scalability of system architecture.
- Develops system engineering, software engineering, system integration, or distributed system architectures.
- Collaborates with engineers or software developers to select appropriate design solutions or ensure the compatibility of system components.
- Identifies system data, hardware, or software components required to meet user needs.
- Communicates with staff or clients to understand specific system requirements.
- Researches, tests, or verifies proper functioning of software patches and fixes.
- Provides advice on project costs, design concepts, or design changes.
- Performs security analyses of developed or packaged software components.
- Provides technical guidance or support for the development, or troubleshooting of systems.
- Documents design specifications, installation instructions, and other system-related information.

How can I use this type of career to help my community?

- Design and manage the computer systems for your tribe's program and departments.
- Support the computer software systems of your tribe by repairing and solving issues that arise within the tribal system.

Systems Software Developer

What they do:

Researches, designs, develops, and tests operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications. Sets operational specifications and formulates and analyzes software requirements. May design embedded systems software. Applies principles and techniques of computer science, engineering, and mathematical analysis.

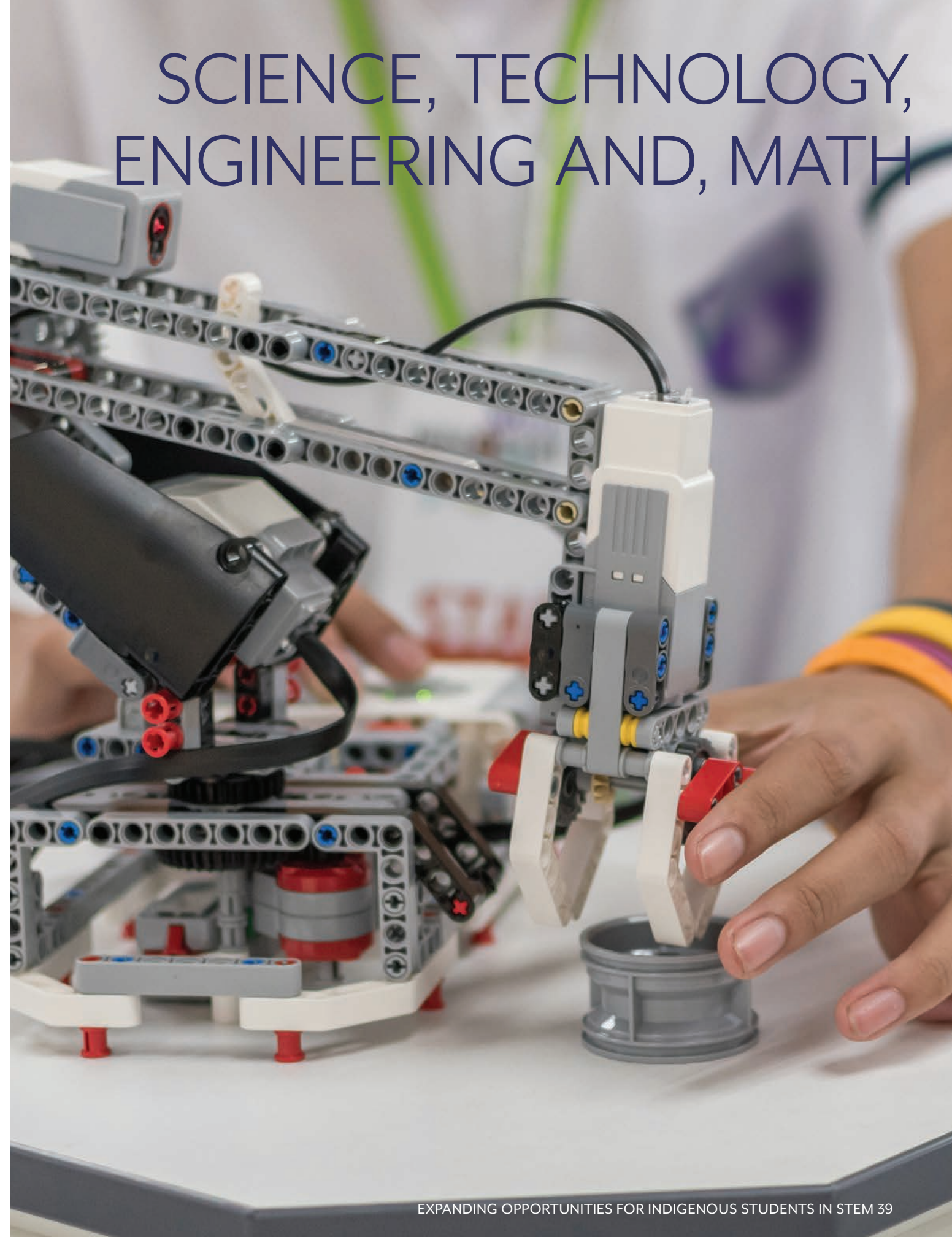
A person in this career:

- Modifies existing software to correct errors, adapt it to new hardware, or upgrade interfaces and improve performance.
- Develops or directs software system testing or validation procedures.
- Directs software programming and the development of documentation.
- Consults with customers or other departments on project status, proposals, or technical issues, such as software system design or maintenance.
- Analyzes information to determine, recommend, and plan the installation of a new system or modification of an existing system.
- Consults with engineering staff to evaluate interface between hardware and software, develop specifications and performance requirements, or resolve customer problems.
- Designs or develops software systems, using scientific analysis and mathematical models to predict and measure outcomes and design consequences.
- Prepares reports or correspondence concerning project specifications, activities, or status.
- Confers with data processing or project managers to obtain information on limitations or capabilities for data processing projects.
- Stores, retrieves, and manipulates data for analysis of system capabilities and requirements.

How can I use this type of career to help my community?

- Design and develop software systems that can provide much-needed support and infrastructure to tribal departments and programs.
- Develop software programs for Indigenous tribal language programs, including language apps, computer games, and oral dictionaries.

SCIENCE, TECHNOLOGY, ENGINEERING AND, MATH



Biologist

Biology is one of the most popular undergraduate majors. Biology is often the chosen major for students who want to go on to medical school, dental school, or veterinary school. Biology students learn about living organisms at the chemical and cellular levels through the study of entire ecosystems. Career options are equally broad and include pharmaceuticals, environmental protection, agriculture, health care, and forensics.



What they do:

Research or study basic plant and animal life principles, such as origin, relationship, development, anatomy, and functions.

A person in this career:

- Prepares technical and research reports, such as environmental impact reports, and communicates the results to individuals in industry, government, or the general public.
- Develops and maintains liaisons and effective working relations with groups and individuals, agencies, and the public to encourage cooperative management strategies or develop information and interpret findings.
- Collects and analyzes biological data about relationships among and between organisms and their environment.
- Programs and uses computers to store, process, and analyze data.
- Supervises biological technicians and technologists, and other scientists.
- Identifies, classifies, and studies plant and animal species' behavior, ecology, physiology, nutrition, culture, and distribution.
- Communicates test results to state and federal representatives and the general public.
- Prepares requests for proposals or statements of work.
- Represents employer in a technical capacity at conferences.
- Studies basic plant and animal life principles, such as origin, relationship, development, anatomy, and function.

How can I use this type of career to help my community?

- Botanist: Research and study physiology, traditional medicinal uses, heredity, environment, distribution, and economic value of plants for application in agronomy, forestry, horticulture, and pharmacology.
- Horticulturist: Conducts experiments and investigations to determine breeding methods, producing, storing, processing, and transporting traditional foods like fruits, nuts, berries, vegetables, flowers, bushes, and trees.
- Marine Biologist: Researches the origin, relationship, development, and functions of plants and animals that live in water.

Chemist

Students in biology, geology, and most engineering fields will need to study chemistry because chemistry underpins everything having to do with materials and matter. Undergrads will typically study organic and solid-state chemistry. They can go on to careers in sustainable energy, medicine, nanotechnology, and manufacturing.

What they do:

Conducts qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge.

A person in this career:

- Analyzes organic or inorganic compounds to determine chemical or physical properties, composition, structure, relationships, or reactions, using chromatography, spectroscopy, or spectrophotometry techniques.
- Conducts quality control tests.
- Maintains laboratory instruments to ensure the proper working order and troubleshoots malfunctions when needed.
- Prepares test solutions, compounds, or reagents for laboratory personnel to conduct tests.
- Induces changes in the composition of substances by introducing heat, light, energy, or chemical catalysts for quantitative or qualitative analysis.
- Evaluates laboratory safety procedures to ensure compliance with standards or to make improvements as needed.
- Compiles and analyzes test information to determine process or equipment operating efficiency or to diagnose malfunctions.
- Writes technical papers or reports or prepares standards and specifications for processes, facilities, products, or tests.
- Confers with scientists or engineers to conduct analyses of research projects, interpret test results, or develop nonstandard tests.
- Develops, improves, or customizes products, equipment, formulas, processes, or analytical methods.

How can I use this career to help my community?

- Forensic Chemist: support crime and detective units in the area of forensics in and around your tribal community.
- Professor: Instruct/Research at a university or tribal college to serve as a role model for other Indigenous students in the area of Chemistry.
- Research Chemist: Study the effects of chemicals within your tribal communities to provide better and safer living environments.

Environmental Scientist

Environmental science is a growing field. Our planet comes under threats from pollution, global warming, mass extinctions, and limited resources. It is an interdisciplinary academic field. Students will typically take classes in math, biology, chemistry, geology, ecology, and other academic areas. Environmental science is an excellent choice for students interested in applying their analytical skills to large-scale problems affecting our world.



Dr. Clint Carroll
Environmental Science

What they do:

Conducts research or performs investigations to identify, abate, or eliminate sources of pollutants or hazards that affect the environment or the population's health. Using knowledge of various scientific disciplines, collect, synthesize, study, report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources.

A person in this career:

- Reviews and implements environmental technical standards, guidelines, policies, and formal regulations that meet all appropriate requirements.
- Provides scientific or technical guidance, support, coordination, or oversight to governmental agencies, environmental programs, industry, or the public.
- Collects, synthesizes, analyzes, manages, and reports environmental data, such as pollution emission measurements, atmospheric monitoring measurements, meteorological or mineralogical information, or soil or water samples.
- Communicates scientific or technical information to the public, organizations, or internal audiences through oral briefings, written documents, workshops, conferences, training sessions, or public hearings.
- Provides advice on proper standards and regulations or the development of policies, strategies, or codes of practice for environmental management.
- Prepares charts or graphs from data samples, providing summary information on the environmental relevance of the data.
- Conducts environmental audits or inspections or investigations of violations.
- Monitors effects of pollution or land degradation and recommends means of prevention or control.
- Designs or directs studies to obtain technical, environmental information about planned projects.
- Analyzes data to determine validity, quality, and scientific significance and interpret correlations between human activities and environmental effects.

How can I use this type of career to help my community?

- Serve as the Chief Environmental Liaison for your tribal nation in all matters related to the protection and care of your tribal lands.
- Provide expertise and advice in the development of policies and strategies affecting your tribal lands.

TECHNOLOGY

“Technology” is the broadest and arguably most confusing STEM category. Engineers, after all, use and study technology, as do many math and science majors. That said, within educational settings, the term is typically applied to anything related to mechanical, electrical, or computer systems. Technology programs can be two-year, four-year, or certificate programs.

There's a significant demand for technology majors. Many companies have a difficult time finding employees with the specific technical skills they need. Some of the most popular technology fields are listed in this section.

Computer Science

A major in computer science can be part of a two-year, four-year, or graduate degree. Coursework is likely to include a lot of math, programming, database management, and computer languages. Good computer scientists enjoy solving problems, and they need to be both logical and creative. The field demands patience for debugging programs and finding solutions to complex problems. Computer scientists work in a wide range of industries outside the realm of technology. Hospitals, financial institutions, and the military all rely on computer scientists.



Marrison Helleesen
Software Engineering

A person in this career:

- Solve problems using technology.
- Write and program software.
- Create applications for mobile devices, and develop websites.
- Validate and to develop mathematical models capable of computer interaction between people and other computers
- Research and focus in areas such as data structure and algorithms, information and database theory, software engineering, numerical analysis, computational complexity theory, computer graphics, programming language theory, and computer vision.

How can I use this type of career to help my community?

- Write program software that can strengthen and build tribal programs including health, home improvement, education, elder care, etc.
- Create applications that can support and grow the language, culture, and history of the tribal nation.
- Develop websites for the tribal nation programs and enterprises.
- Develop video games that incorporate tribal history, stories, and language.

Information Technology

Information Technology (IT) is related to computer science. Both fields require students to learn about computer systems and develop programming skills. Information technology, however, tends to be more directly linked to business applications. A college graduate with an IT degree will help keep operating systems running, support and train colleagues who need to use computer systems, and develop new tools for business needs. IT specialists develop, test, and maintain the computer tools and networks needed to keep businesses running. Depending on the college, you'll find everything from two-year to doctoral degrees in IT.

A person in this career:

- Administers network and data security, including directory, group policy, firewalls, virus protection, and email security.
- Installs and updates network system improvements.
- Installs and configures wireless networking equipment.
- Assists with the design, implementation, and support of new software and features.
- Evaluates connectivity issues, equipment, and software and hardware.
- Respond to IT issues; hardware maintenance, software, networking, etc.

How can I use this type of career to help my community?

- Provide much needed network database system support for all tribal programs and departments.
- Oversee all areas of data security for the tribal nation.



ENGINEERING

Engineering and technology overlap considerably, but true engineering degrees tend to be rigorous four-year degrees (and graduate degrees) with coursework that spans a range of science, engineering, math, and laboratory classes. You'll also find that four-year graduation rates for engineering programs tend to be lower than for many other majors because of the demanding coursework and because many programs encourage or require students to get hands-on experience through internships, co-ops, or different work experiences.

Like technology and the sciences, there are hundreds of different engineering programs offered across the country. However, most draw upon a handful of core subject areas.



Aerospace Engineer

Within university academic programs, this field is often combined with aeronautical and astronomical engineering. Students can expect coursework in fluid dynamics, astrodynamics/aerodynamics, propulsion, structural analysis, and advanced materials, along with a strong math and physics foundation. The major is an excellent choice if your dream is to be an engineer working for NASA, Boeing, the Air Force, SpaceX, or similar companies and organizations.

What they do:

Performs engineering duties in designing, constructing, and testing aircraft, missiles, and spacecraft. May conduct basic and applied research to evaluate the adaptability of materials and equipment to aircraft design and manufacture. May recommend improvements in testing equipment and techniques.

A person in this career:

- Formulates mathematical models or other computer analysis methods to develop, evaluate, or modify designs according to customer engineering requirements.
- Plans or conducts experimental, environmental, operational, or stress tests on models or prototypes of aircraft or aerospace systems or equipment.
- Formulates conceptual design of aeronautical or aerospace products or systems to meet customer requirements or conform to environmental regulations.
- Plans or coordinates activities concerned with investigating and resolving customers' reports of technical problems with aircraft or aerospace vehicles.
- Writes technical reports or other documentation, such as handbooks or bulletins, for engineering staff, management, or customers.
- Directs or coordinates engineering or technical personnel activities to design, fabricate, modify, or test aircraft or aerospace products.
- Evaluates product data or design from inspections or reports for conformance to engineering principles, customer requirements, environmental regulations, or quality standards.
- Develops design criteria for aeronautical or aerospace products or systems, including testing methods, production costs, quality standards, environmental standards, or completion dates.
- Analyzes project requests, proposals, or engineering data to determine feasibility, productivity, cost, or production time of aerospace or aeronautical products.
- Maintains records of performance reports for future reference.

How can this type of career support my community?

- Represent your tribe and your tribal community as an aerospace engineer at NASA.

Chemical Engineer

Students in chemical engineering will take classes in math, chemistry, physics, engineering, and biology. Careers in chemical engineering span many businesses, including desalination plants, microbreweries, and companies working to develop sustainable fuels.



Michael Charles
Chemical Engineering

What they do:

Designs chemical plant equipment and devises processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying chemistry, physics, and engineering principles.

A person in this career:

- Develops safety procedures to be employed by workers operating equipment or working near ongoing chemical reactions.
- Develops processes to separate components of liquids or gases or generate electrical currents using controlled chemical processes.
- Troubleshoots problems with chemical manufacturing processes.
- Evaluates chemical equipment and processes to identify ways to optimize performance or ensure compliance with safety and environmental regulations.
- Conducts research to develop new and improved chemical manufacturing processes.
- Performs laboratory studies of steps to manufacture new products and test proposed processes in small-scale operations, such as a pilot plant.
- Prepares estimate of production costs and production progress reports for management.
- Designs measurement and control systems for chemical plants based on data collected in laboratory experiments and pilot plant operations.
- Determines the most effective arrangement of operations such as mixing, crushing, heat transfer, distillation, and drying.
- Monitors and analyzes data from processes and experiments.

How can I use this type of career to help my community?

- Design and develop chemical products that can support not only your tribal communities but the entire world.

Electrical Engineer

From your computer to your television to the World Wide Web, we all rely on products and technologies that electrical engineers have had a hand in developing. As a major, your coursework will have a significant grounding in physics. Electromagnetism, circuits, communication and control systems, and computer science will all be part of the curriculum.

What they do:

Researches, designs, develops, tests, or supervises the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.

A person in this career:

- Operates computer-assisted engineering or designs software or equipment to perform engineering tasks.
- Prepares technical drawings, specifications of electrical systems, or topographical maps to ensure that installation and operations conform to standards and customer requirements.
- Confers with engineers, customers, or others to discuss existing or potential engineering projects or products.
- Designs, implements, maintains or improves electrical instruments, equipment, facilities, components, products, or systems for commercial, industrial, or domestic purposes.
- Directs or coordinates manufacturing, construction, installation, maintenance, support, documentation, or testing activities to ensure compliance with specifications, codes, or customer requirements.
- Compiles data and writes reports regarding existing or potential electrical engineering studies or projects.
- Performs detailed calculations to compute and establish manufacturing, construction, or installation standards or specifications.
- Prepares specifications for purchases of materials or equipment.
- Estimates labor, material, or construction costs for budget preparation purposes.
- Supervises or trains project team members as necessary.

How can I use this type of career to help my community?

- Design, develop and manufacture electrical equipment to support the infrastructure and advancement of your tribal community.

Materials Engineer

Materials science and engineering majors often focus on a specific sub-discipline such as plastics, electrical materials, metals, ceramics, or biomaterials. Coursework will include physics and a lot of advanced chemistry. Materials scientists are needed in diverse industries, so professions span everything from computer manufacture to automotive sectors to the military.

What they do:

Evaluates materials and develops machinery and processes to manufacture materials for products that must meet specialized design and performance specifications. Creates new uses for known materials. Includes those engineers working with composite materials or specializing in one type of material, such as graphite, metal and metal alloys, ceramics and glass, plastics and polymers, and naturally occurring materials. Includes metallurgists and metallurgical engineers, ceramic engineers, and welding engineers.

A person in this career:

- Reviews new product plans and makes recommendations for material selection based on design objectives such as strength, weight, heat resistance, electrical conductivity, and cost.
- Supervises the work of technologists, technicians, and other engineers and scientists.
- Analyzes product failure data and laboratory test results to determine the causes of problems and develop solutions.
- Conducts or supervises tests on raw materials or finished products to ensure their quality.
- Plans and implements laboratory operations to develop material and fabrication procedures that meet cost, product specification, and performance standards.
- Designs and directs the testing or control of processing procedures.
- Monitors material performance and evaluates material deterioration.
- Performs managerial functions, such as preparing proposals and budgets, analyzing labor costs, and writing reports.
- Plans and evaluates new projects, consulting with other engineers and corporate executives as necessary.
- Guides technical staff in developing materials for specific uses in projected products or devices.

How can I use this type of career to help my community?

- Support the economic development of your tribal nation in developing materials for tribal community purposes or global production of materials or devices.

Mechanical Engineer

Mechanical engineering is one of the older and most popular engineering fields. Students take courses in mechanics, dynamics, fluids, and design, along with lots of math and physics. Nanoengineering and robotics often fall under the umbrella of mechanical engineering, and both are growing fields.



Cherise John
Mechanical Engineer

What they do:

Performs engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversees installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.

A person in this career:

- Reads and interprets blueprints, technical drawings, schematics, or computer-generated reports.
- Researches, designs, evaluates, installs, operates, or maintains mechanical products, equipment, systems, or processes to meet requirements.
- Confers with engineers or other personnel to implement operating procedures, resolve system malfunctions, or provide technical information.
- Develops, coordinates, or monitors all aspects of production, including selecting manufacturing methods, fabrication, or operation of product designs.
- Investigates equipment failures or difficulties to diagnose faulty operations and recommends remedial actions.
- Develops or tests models of alternate designs or processing methods to assess feasibility, sustainability, operating condition effects, potential new applications, or necessity of modification.
- Specifies system components or directs modification of products to ensure conformance with engineering design, performance specifications, or environmental regulations.
- Recommends design modifications to eliminate machine or system malfunctions.
- Assists drafters in developing the structural design of products using drafting tools or computer-assisted drafting equipment or software.
- Oversees installation, operation, maintenance, or repair to ensure that machines or equipment are installed and functioning according to specifications.

How can I use this type of career to help my community?

- Oversee the installation, operation, maintenance, and repair of equipment for centralized heat, gas, water, and steam systems in your tribal community.

Mathematician

A bachelor's degree in mathematics will include coursework in subjects such as multi-variable calculus, differential equations, statistics, as well as various courses related to algebra and geometry. Strength in mathematics can lead to a wide range of careers in education, economics, financial planning, and cryptography.

What they do:

Researches fundamental mathematics or application of mathematical techniques to science, management, and other fields. Solves problems in various areas using mathematical methods.

A person in this career:

- Develops computational methods for solving problems in science and engineering or that come from applications in business or industry.
- Applies mathematical theories and techniques to practical problems in business, engineering, the sciences, or other fields.
- Develops mathematical or statistical models of phenomena to be used for analysis or computational simulation.
- Assembles sets of assumptions and explores the consequences of each set.
- Maintains knowledge in the field by reading professional journals, talking with other mathematicians, and attending professional conferences.
- Addresses the relationships of quantities, magnitudes, and forms through the use of numbers and symbols.
- Disseminates research by writing reports, publishing papers, or presenting at professional conferences.
- Performs computations and applies methods of numerical analysis to data.
- Develops new principles and new relationships between existing mathematical principles to advance mathematical science.
- Designs, analyzes, and deciphers encryption systems designed to transmit military, political, financial, or law-enforcement-related information in code.

How can I use this type of career to help my community?

- Apply mathematical theories and techniques to solve problems in tribal community businesses, engineering, or other fields.



Civil Engineer

What they do:

Performs engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.



Chayla Rowley
Civil Engineering

A person in this career:

- Inspects project sites to monitor progress and ensure conformance to design specifications and safety or sanitation standards.
- Computes load and grade requirements, water flow rates, or material stress factors to determine design specifications.
- Provides technical advice to industrial or managerial personnel regarding design, construction, program modifications, or structural repairs.
- Tests soils or materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel.
- Manages and directs the construction, operations, or maintenance activities at the project site.
- Directs or participates in surveying to lay out installations or establish reference points, grades, or elevations to guide construction.
- Estimates quantities and cost of materials, equipment, or labor to determine project feasibility.
- Plans and designs transportation or hydraulic systems or structures using computer-assisted design or drawing tools.
- Prepares or presents public reports on bid proposals, deeds, environmental impact statements, property, and right-of-way descriptions.
- Designs energy efficient or environmentally sound civil structures.

How can I use this type of career to help my community?

- Manage and direct the construction, operations, or maintenance activities of tribal project developments.
- Contribute to the growth of your tribal community by managing and directing the construction, operations, or maintenance activities on all tribal project developments.

CREATING A RESUME

A resume is a clear and concise professional document written to provide a brief (usually one page) snapshot of your most relevant accomplishments, qualities, and interests. It is used to show you have the knowledge, skills, and experiences relevant to a particular job and to entice the employer to interview or hire you. Your resume is very important as it is often the first thing an employer uses to evaluate you.

When creating a resume, it is important to emphasize both your work history and your education. As a student who may not have had much professional job experience, but you can demonstrate your skills and abilities by including volunteer work, internships, and other extracurricular activities.

What to include in your resume:

- **Focus on education.** Emphasize your academic history. Along with the name of your school and degree, include any achievements, such as a high GPA, or any academic or leadership awards. If you have taken courses related to the job you are applying for, list those as well.
- **Include relevant jobs.** Think about the skills and experiences required for the job you want. Include any internships or jobs where you developed these skills and list these in your resume. Even if your work experiences are not directly related, think of ways to highlight these experiences to make them relevant to the job you want.
- **Include extracurricular activities.** Because you will not have an extensive work experience, emphasize all of your non-work activities. These might include student clubs, sports, volunteer work, or community service. All of these activities can show your skills and abilities.
- **Include leadership experience.** If you have held a position in a club, served as a tribal princess, or have been a captain on a sports team, you should list these on your resume. Have you had any leadership responsibilities at your previous jobs or internships? Be sure to list these experiences, as they show your ability to lead a team.

Tips for Writing your Resume

- **Use action verbs.** Action verbs show your responsibility. When describing your achievements, use action words like led, researched, and created to portray your experiences in a more powerful way. Use your thesaurus function in Microsoft Word to find the best verbs possible.
- **Showcase the skills that qualify you for the job.** Some skills are in high demand for employers hiring students. Be sure to include the most relevant skills on your resume as employers are searching for specific skills when hiring.
- **Carefully edit and proofread.** Be sure to proofread your resume carefully before submitting. A clean, error-free resume will make you look professional and detail-oriented which is often a skills employers are looking for. Ask a friend or mentor to proofread your resume before you submit.
- **Use a resume example.** We have included a resume example in this guidebook to provide a sample of what yours should look like. There are also many resume examples online, so please review a few to give you examples of what to include in yours, as well as how to format your resume.
- **Get help.** If you need help writing your resume, check with your high school counselor or your mentor to get assistance and advice. There are also tons of resume help sites online as well.

Taylor Bryce

Comanche Nation Citizen
204 LittleBear Loop PO Box 49, Dodge, OK 73005
(555) 555-5555 | dancingstudent@gmail.com

QUALIFICATIONS

Academic Honor student who demonstrates excellent leadership skills, creativity, and organization, with a strong desire to deliver success and a reliable team member.

EDUCATION

Elgin High School, Elgin, OK

- GPA: 4.00
- Relevant Coursework: Kiowa I and II, Intro to Graphic Design
- Clubs and Activities: Native American Club, STEM Club, Dance Team, Art Club

EXPERIENCE

Braums – Counter Help

September 2017 – Present

- Clean up all counters following all Covid-19 procedures
- Prepare counters for kitchen and cashier staff

Comanche Elders Center – Volunteer

January 2018 – Present

- Set up tables for dining
- Serve all elders during meals
- Lead games and storytelling with all elders

Fort Sill Apache Tribal Office – Summer Intern

June 2018 – August 2018

- Completed all filing for Education office
- Create folders for tribal council meetings
- Outreach to all high school seniors for scholarships

Special Skills

Microsoft Office Suite, HTML, Outlook, etc.

Honors and Awards

- Miss Comanche Nation, 2017-2018
- Superintendent's Honor Roll, 2016-2017, 2017-2018, 2018-2019
- Lead Ballet Dancer for Lawton Ballet Theater

References

Employers will want to hear from people who can share information about your ability to perform in a professional environment. Your references should be from people who can support and provide additional information that supplements what you presented in your resume.

EDUCATION: THIS SECTION SHOULD INCLUDE THE NAME OF YOUR SCHOOL AND THE LOCATION. YOU CAN INCLUDE YOUR GPA AND RELEVANT COURSE WORK AND EXTRACURRICULAR ACTIVITIES.

BE SURE TO INCLUDE ALL USEFUL PERSONAL INFORMATION. USE YOUR CURRENT ADDRESS, CONTACT PHONE NUMBER, AND EMAIL ADDRESS. YOU CAN ALSO INCLUDE YOUR TRIBAL AFFILIATION.

LIST ALL OF YOUR JOB RELATED EXPERIENCES – INCLUDE VOLUNTEER AND LEADERSHIP EXAMPLES.

INCLUDE ALL OF YOUR SPECIAL SKILLS. THIS SHOULD INCLUDE ANY COMPUTER/CODING SKILLS.

LIST ALL OF YOUR HONORS AND AWARDS THAT YOU HAVE RECEIVED UP TO THIS POINT. IF YOU HAVE ANY TITLES OR AWARDS OUTSIDE OF SCHOOL, BE SURE TO INCLUDE THOSE AS WELL INCLUDING ANY TRIBAL TITLES OR CULTURAL RECOGNITIONS.

COLLEGE READINESS

So you have decided to attend college (AWESOME!), and have decided on a major/career, now you must begin to prepare for starting your college journey. Once you know what you would like to pursue, you must develop a plan to start that pathway. This plan also takes some time to build and set in motion. As you set forth on designing your plan, we have provided some key tips and checklists to help you along your way. The next half of this guidebook will provide helpful information and tips to help you get ready for your first year of college. This part of your college journey can be very confusing and tiring, but you can do it!





PLAN - How do I get there?

Preparing for college is a huge task and usually takes several years to get ready. Most students who plan to go to college begin in the 9th grade as this is the year when your high school Grade Point Average (GPA) begins.

The following checklists provide essential steps for each year of your high school journey to help make your transition to college a smooth one. Please keep these checklists with you as you go through high school, and be sure to ask for help if you need additional assistance. Good luck!

Freshman Year Checklist

- **Maintain a good GPA:** Do well in your classes and try your best to earn A's and/or B's. The higher your grades, the higher your GPA will be.
- **Get to know your high school counselor:** Your high school counselor is there to help you along your academic journey. They can provide helpful information and can provide extra insight into your college and career plans. You will be working with this person for the next four years of high school, and they are there to help guide you toward your future goals. If you plan to go to college, let them know this and inform them of your career plan so they may help get you there by working with you to select the best courses.

It may be a little intimidating to speak to your counselor, but keep in mind that they are there to help you. It is their job to provide extra support and answer your questions. These are a few questions you should ask your counselor:

- What courses do you recommend that I take to prepare for college?
- How many years of each academic core area are required for graduation?
- What elective courses do you recommend for my future plan?
- Are concurrent classes offered at my high school? And what do I need to do to enroll in these classes?
- What extracurricular activities and community involvement can I do in my community or over the summers to better prepare me for college?

- **Talk to People:** You may have someone you know in a professional job that you admire. This may be your doctor at the local hospital, a veterinarian, the IT person at your high school, your supervisor at your summer job, or a teacher that you like. In determining what career path to take, it is good advice to ask questions and talk to people in careers you may want to know more about. These conversations can help you better understand if their careers are something you may want to go into.
- **Join a Science Club:** Your high school may have a science club and this is a great way to meet other friends who share the same interest in science as you. Your club may even decide to join in local science competitions or host or compete in a science fair.

Sophomore Year Checklist

- ▶ **Be Social:** Getting good grades is important for acceptance into college, but extracurricular activities are also crucial to colleges. Participating in sports and/or clubs will show your interests and involvement and show your leadership skills.
- ▶ **Stay Connected:** Many of you already are very skilled at computers, smartphones, and tablets; these are excellent skills to have or build now as you should begin to explore the many resources available to you as students. These online resources provide valuable information, including writing and research skills, scholarship searches, and pre-college visitations and camps. Download helpful apps, sign up for insightful podcasts, and subscribe to YouTube channels to provide great insight for you as you continue along your path to college.
- ▶ **Look for Guidance from your High School Counselor:** It is essential to maintain and continue to build your relationship with your high school counselor. By communicating and connecting with your counselor, you are building this relationship so your counselor will be better able to help you stay on track for your future goals. As you continue along your path and you explore your career options, be sure to ask these questions to your counselor:

- What courses should I take each year to set me up for success in my junior and senior years?
- What classes will help prepare me for the ACT and the SAT?
- What qualities and leadership skills are colleges looking for? How can I better develop these skills, and what extracurricular activities can I take to improve my college applications?
- What are advance placement (AP) courses, and what does my school offer?
- What is dual enrollment? Is it possible to enroll in these courses?
- Do you know of any internships or summer camps that will help me explore and choose a career pathway?
- What organizations do you know of that I can look into joining for exploring career paths?



- ▶ **PSAT or PLAN:** You can get early practice for the SAT or ACT by taking the PSAT or the PLAN. These are practice tests for the actual exams you should take the following year when you are a Junior. Your counselor should be able to guide signing up for these exams.
- ▶ **Science Courses and Labs:** Suppose you are planning on a STEM degree in college. In that case, it is a good idea to take AP courses that will help you develop lab skills and learn the groundwork knowledge to find success in your college courses. Taking college-level classes will prepare you and potentially grant you college credit if you do well in the course and exam.
- ▶ **AISES Opportunities:** AISES hosts several events that can not only help build your research and science skills, but you can also find other friends that share similar interests in the STEM fields. AISES is a great organization that can provide great opportunities such as networking.
 - NAISEF
 - Energy Challenge
 - Poster Research Competition
 - STEM Day at the AISES National Conference
 - Opportunities Board
 - Winds of Change Paths to Opportunities newsletters
- ▶ **College Visits/Tours:** It is not too early to begin looking at colleges and universities. You should attend college fairs in your area and sign up for mailing lists from the schools you may be interested in. If you can, try to visit colleges in your area to get an idea of college life. If your family takes vacations or if you happen to have an older sibling or cousin in college, try to visit these college campuses. Bring your family with you and keep them informed on your journey!

<http://fairs.aises.org/ec>



Junior Year Checklist

Your junior year is when your college plans take on a more serious turn into coming to fruition. It is essential that you keep track of all of your to-do items on your checklists!

► FALL

- Meet with your school counselor
 - Be prepared to discuss your college plans
 - Ask your counselor about college night events
- Meet (call or email) with your Tribal Higher Education Department
 - Ask about tribal scholarships for college
 - Ask about tribal college outreach events
 - Ask about a summer internship or work programs related to your career path
- Take challenging coursework
 - Take classes that challenge you to prepare for rigorous college courses
 - Your counselor should be able to help you plan your courses for the next two years
- Explore scholarship possibilities
 - Research scholarships online – AISES has several excellent scholarships, including some specifically for incoming first-year college students.

► WINTER

- Narrow your college choices
 - Take a closer look at the colleges you are considering and narrow it to those you'd like to visit. Your school counselor and family can help you focus on schools that are right for your career path.
 - Consider the financial aspect of your college choices and compare the costs of colleges on your lists. Check for financial assistance that you may qualify for at each school.
- Sign up for College Board Opportunity Scholarships. This scholarship program guides you through the college planning process.
- Sign up for the SAT or ACT in the spring by registering online or through your school.
 - Ask your counselor about fee waivers for the tests and any other additional resources that help you prepare and practice for these exams.
 - Ask your Tribal Higher Education Department if they have an ACT/SAT Prep Program. Some tribes provide preparation classes and may also be able to cover the costs of the exams.

- Plan out the testing dates and remember to allow enough time to study beforehand. If you take the exams early enough, you can have multiple attempts to improve your scores. Ideally, take the test in May or June of your Junior year.

- Draft your resume
 - Format a resume that lists your academic accomplishments, extracurricular activities, volunteer positions, work experiences, and your general interests since you started high school.
- Start researching scholarships, grants, and other financial aid. AISES has excellent scholarships, but you should also use the College Board Scholarship Search tool to find additional scholarships you may qualify for. Also, look into tribal, local, and state aid sources. Ask a counselor or your mentor to help guide you through this process.
- Stay involved in your extracurricular activities: colleges look for consistency and leadership in your non-academic activities.
- Create a folder for college application materials: Place all forms or college information you gather from college fairs and tours in a hard copy or digital folder.

► SPRING

- Meet with your counselor about your college list: Gather input about your college choices and ask about college visits and tours.
- Take the SAT: The SAT is offered in March, May, and June. If you do not score as high as you wish, you may retake the test in the fall of your senior year before applications are due.
- Letters of Reference
 - Begin to reach out to teachers, coaches, supervisors, or mentors now about letters of reference for your college and scholarship applications.
 - These people may also provide advice and guidance about your college choice and the college process.

► SUMMER

Research Applications: Check application deadlines and requirements for schools you are interested in applying to. Place all application deadlines on a calendar for you to keep track of all dates.

► FAFSA Preparation:

- To fill out your Free Application for Federal Student Aid (FAFSA), you will need to get a username and password known as a FSA ID.
- Begin to gather information for your financial aid to familiarize you and

your family with the process.

- Get your Personal Identification Number (PIN) for the FAFSA application at pin.ed.gov.
- Be sure to save and store your FAFSA information (PIN, username, and password) in a secure place.
- **Start working on your personal statement:** The essay is an important part of your college application. Make sure you give yourself plenty of time to write, edit, and rewrite it to make sure it is well done. Seek guidance from mentors or your counselor if you need help.
- **Consider retaking the SAT in the Fall:** Review your SAT score report with your parent/guardian or mentor and decide if you should retake the SAT in the fall. Many times, students do see an increase in their scores when they retake the SAT.
- **Obtain a Summer Job:**
 - Consider getting a full-time or part-time summer job. You will gain job skills and build your resume.
 - Check to see if your tribe has a summer job program for tribal citizens. This will be a great way to understand how your tribe operates and allows you to gain valuable job skills.
 - Consider participating in a summer camp or a volunteer activity; this will also look good on your resume.



Senior Year Checklist

Your senior year is a very important one and will go by very fast. There are many things you must do in your final year to transition to college and you must stay on top of everything.

► FALL

- Meet with your school counselor
 - Be prepared to discuss your college plans.
 - Ask your counselor about college night events.
- Meet (call or email) with your Tribal Higher Education Department.
 - Ask about tribal scholarships for college.
 - Ask about tribal college outreach events.
 - Ask about a summer internship or work programs related to your career path.
- Take challenging coursework
 - Take classes that challenge you to prepare for rigorous college courses.
 - Your counselor should be able to help you plan your courses for the next two years .
- Explore scholarship possibilities
 - Research scholarships online – AISES has several excellent scholarships, including some specifically for incoming college freshmen. AISES Scholarships open on January 31 of each year.
- Check-in with your teachers or people writing letters of recommendation. Make sure they are aware of deadlines for your materials. The AISES Scholarship deadline is May 31 of each year.
- Prepare your college applications. When writing your essays, be sure to proofread your work. Use your resources and seek out a teacher or a mentor to review your essays before submitting them.
- Search and apply for scholarships from various sources, including your college(s) of choice.
- The FAFSA application opens on October 1. Ask schools if they require additional information for your financial aid package.
- Early decision/early action: November 1-15
- Complete at least one college application by Thanksgiving. Don't forget to submit a transcript request with your schools for college and scholarships. Be sure to send your test scores as well.
- Before the holiday break in December, submit all college applications.

<https://www.aises.org/students/scholarships>

- Plan for college admissions.
 - Meet with admissions representatives.
 - Secure recommendation letters.
 - Work on application essays.
 - Review and schedule application deadlines for schools where you want to apply.
- Continue your scholarship searches.
- Get your financial aid eligibility estimate with the FAFSAFcaster at fafsa.gov.
- Compare estimated college costs and aid availability of your top colleges with the Net Price Calculator (NPC) on each college and university's website.

► **WINTER**

- Complete applications
- Request your high school send transcripts to the colleges and universities to which you've applied, adhering to the requirements of each school
- Ensure all information is correct when you receive your Student Aid Report
- Apply for financial aid, if needed
- Narrow your list of colleges to your top five choices.
- Participate in college visit programs: many colleges host open houses and group tours. Some colleges have fly-in programs specifically for Native students. Make a list of what you like best about each college you visit so you can compare them when you get home.
- Request Documents: from your tribe, including your Certificate of Indian Blood (CIB) or Certificate of Degree of Indian Blood (CDIB), letter of descent, or enrollment verification. You may need them for college and scholarship applications. AISES Scholarship requires this type of verification.
- Take the SAT one more time: Many seniors retake the SAT in the fall-additional coursework and practice - since your last test could boost your score.
- Fill out college applications: Breaking the work into chunks will make it easier—complete at least one application by Thanksgiving break. Use a checklist to track your application process.
- Ask a counselor, teacher, or community member for recommendations: if needed. Give them an outline of your academic record and extracurricular activities, and at least one month to write your letter. Send thank you notes to your recommendation writers.
- Complete your personal statement: and ask for feedback from advisors, family members, and peers. If you are applying for an early decision, you should finish your final draft by mid-November.

- Ask counselors to send your official high school transcripts to colleges. Give them the proper forms at least three weeks before the application deadline.
- Make and keep copies of your applications and essays
- Follow up with your counselor or teacher: to see if any colleges you've applied to require a second-semester transcript and send it as soon as it is available.
- Apply for scholarships: Complete all required materials and send the applications by the deadline.

► **SPRING**

- Watch for financial aid award letters.
- Compare award letters to determine whether awarded financial aid and family resources cover college costs.
- If you've taken AP (advance placement) courses, register to take exams at the end of the semester.
- Select your college and mail in your tuition deposit by the deadline to secure your admission.
- Register for summer orientation at your college or university.
- Celebrate your high school graduation.
- Prepare for college with a checklist of things you need and tasks to complete
- Apply for additional funding, if needed.
- If you can, visit your final college options to help you make your decision. You should receive acceptance letters and financial aid offers by mid-April. If you have questions about offers, talk to your counselor or call the college.
- Review any financial aid awards: Be sure to share the different aid packages with your family before deciding which college to attend.
- Notify your counselor of your final choice: and let every college that offered you admission know by May 1 if you will or won't be going there. Colleges can't require your deposit or commitment to attend before May 1. Talk to our counselor or advisor if you have questions.
- Take any AP Exams: to show what you've learned in your AP courses. A successful score could even earn you college credit, advanced placement, or both.
- Ask about first-year fellowship programs: Once you're accepted, you should be able to search and apply to specific enrichment and readiness programs for additional support, mentorship, or scholarships before or beyond your first year.
- Relax: The college admissions process is not easy. Congratulate yourself and thank those who helped you throughout your journey.

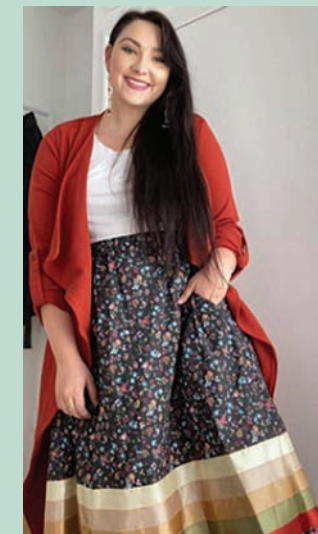
- Start researching housing on campus at the schools of your choice. Consider if living at home is an option, living off-campus, or a deposit for residence hall is needed. Housing fills up fast!
- Keep active in school and keep your grades up. If schools are debating to take you, they will follow up to see if you are keeping up in classes and staying involved.
- If possible, visit the college before accepting and inquire about any concerns such as housing.
- Compare financial aid packages: at the schools that have accepted you
 - Sit down with your family, understand what each grant or scholarship will pay for, and consider any additional funding needed through loans.
 - Consider any funding needed for future years and what action may be needed from year to year.
 - Consider the best option along with your academic and social needs.
 - Accept your school by May 1 and submit a deposit to the college of your choice. If you cannot pay the deposit, communicate with the Financial Aid office on waiver or deferment options. Ask your high school to send in a final transcript to your school. Be sure to follow up with other schools about your final decision.

► **SUMMER**

- Watch for all college notifications (dorm selection and assignment, on-campus parking registration, etc.).
- Watch for upcoming fall-term class registration deadlines.
- Watch for college bills and make sure costs are covered by financial aid and family resources.
- Double-check you have the money you need to cover college expenses.
- Start making lists of things you need when you go to college, such as clothes and dorm essentials.
- Get experience and earn some spending money by finding a summer internship or job.
- Stay up to date on events at your college/university through their website or social media platforms.
- Take summer enrichment courses or courses at local colleges. Check that your college will accept the courses offered if you're seeking credit or placement into a specific class or track.

There's a tendency to have an easy year. Don't slack off your senior year! It will help you be more prepared for college. Just keep challenging yourself. College will hit you even harder, so if you keep up the hard work and momentum, it will be good.

McKalee Steen

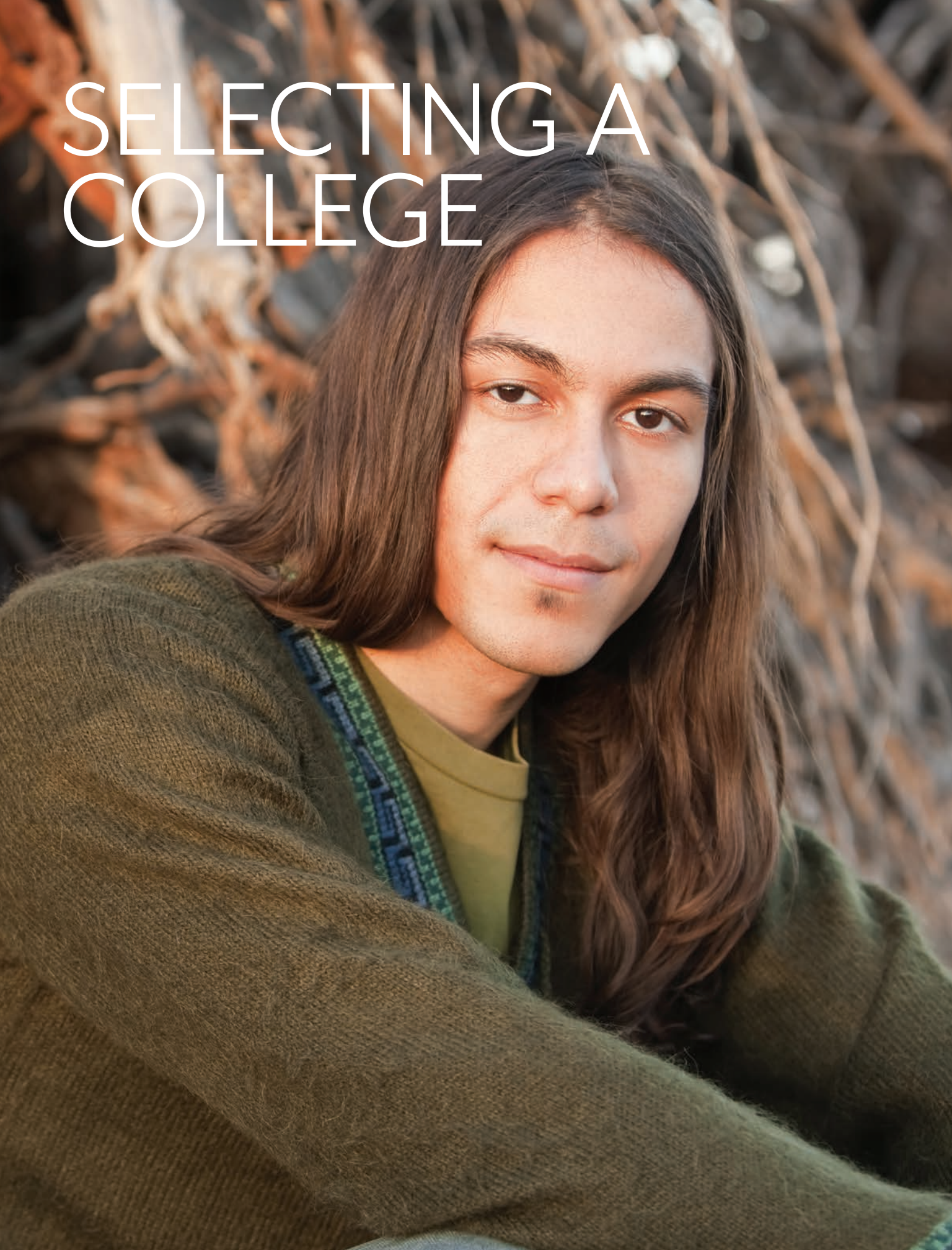


Take Dual Enrollment/ college courses in high school. It's free, and you will be getting prepared early. Take advantage if your school has this. It will get you into that college mindset before college.

Mikaela David-John



SELECTING A COLLEGE



There are multiple factors in selecting a college or university. In addition, when going to college to obtain a STEM degree, it is crucial that you choose a program that can provide the labs, instructors, and support services needed to help you get your degree at your college.

There are many colleges and universities, so it is wise to create a college list to help you narrow down and keep track of your choices. To start your college list, consider what your priorities for college are. When you begin to create your college list, consider what your priorities for college are. Keep these questions in mind when you are considering your college lists. You may also want to bring in your family when creating this priority list.



Keep these questions in mind when thinking about the colleges you want to apply to:

Types of colleges: Do I want to go to a two-year or a four-year college? Am I limiting my choices by focusing on whether a college is public or private? Would a tribal college or Native American Service Nontribal Institution be best for me?

◆ TCU's:

If you're interested in attending an institution located near a reservation or controlled by a tribe, a Tribal College or University (TCU) may be the best for you. Most TCUs are located near Native communities, which allows them to offer degree programs within a Native learning environment full of culture and tradition.

◆ Native American Service Nontribal Institutions:

There are some institutions that are designated as Native American Serving Nontribal Institutions. These institutions can be accurately described as having 10% or more Indigenous identifying student populations. They are primarily two-year institutions, with many exceptions, and primarily public institutions, with few exceptions.

Location: How close to home do I want to be? Do I want to stick to a setting I'm used to, or should I try something new? Am I staying near home because I think it'll be less expensive? Do I want to be near Native communities? Do you have to balance your education with a job?

Campus setting: Do I see myself at a college with many students or in a smaller community? Do I want to be at a college where students stay on campus most of the time? Do I want to live in a dorm? Do I want to be at a college where sports are a big deal?

Cost: Do I have the facts about what college will cost? Will I qualify for financial aid? Am I eligible for scholarships?

Majors: What are my favorite subjects? Do I want to take classes on many different topics or focus mainly on one? Are there Indigenous studies majors or Native faculty members?

Learning environment: Do I learn best when I'm academically comfortable or academically challenged? Do I prefer to be part of small-group discussions or to listen to lectures? How much interaction do I want with my professors? What balance am I looking for between studying and social life? Do I want to choose most of my classes myself, or do I prefer more structure?

◆ Best Schools for Studying STEM:

Any recommendation of where you should study a STEM field will depend on your specific interests, career goals, academic credentials, and personal preferences. What type of degree do you want? Can you go anywhere in the country, or are you geographically limited? Do you have to balance your education with a job?

For full-time, four-year degree programs in STEM fields, however, a few schools frequently top the national rankings:

- **Massachusetts Institute of Technology (Cambridge, Massachusetts):** MIT is always at or near the top of the rankings of the best engineering schools, and it has even been at the top of the rankings of the best universities in the world. Its location near downtown Boston, Harvard University, and Boston University is a bonus.
- **California Institute of Technology (Pasadena, California):** Caltech often vies with MIT for the top spot on rankings of the nation's best engineering schools. The school is a research powerhouse with its 3 to 1 student-faculty ratio and impressive faculty. Students will have plenty of opportunities to work in the lab with graduate students and faculty members.
- **Cornell University (Ithaca, New York):** Cornell is arguably the strongest of all eight Ivy League schools when it comes to STEM fields. The university has an entire quadrangle dedicated to engineering, and over 1,500 students graduate from undergraduate STEM fields every year. Bonuses include one of the nation's best college towns and beautiful views of Lake Cayuga.
- **Georgia Institute of Technology (Atlanta, Georgia):** As a public university option, Georgia Tech is hard to beat for STEM majors. Each year, the university graduates over 2,300 students in engineering programs alone. Undergraduates will find plenty of co-ops, internships, and research opportunities. Plus, Georgia Tech students can enjoy the energy and excitement of attending an NCAA Division I university.
- **Stanford University (Stanford, California):** With its 5 percent acceptance rate and international reputation, Stanford competes with MIT and the Ivies to top the rankings. Stanford is a comprehensive university with wide-ranging strengths, but engineering, biological, and computer science fields are particularly strong.

These five schools represent just a few of the best places to major in STEM fields. The United States has many excellent engineering schools. And suppose you're looking for a smaller school with a predominantly undergraduate focus. In that case, you'll want to check out some of the excellent undergraduate engineering colleges, too. These schools all have strengths in science, math, and technology fields as well as engineering. Research services for Native students or ones specific to your major or your area of study at the colleges on your list. This will be important when you begin narrowing your options based on resources that colleges may or may not offer Native students.



Search for Native Student Resources You may need support as you transition from high school to college. Fortunately, many colleges have services and programs specifically for Native students. Some examples include: Centers for Native students: Colleges like Northern Arizona University, University of New Mexico, Fort Lewis College, and Purdue University have centers that maintain a supportive network for Indigenous students. Some colleges, including the University of Oklahoma, Columbia University, Dartmouth College, and Stanford University, also host powwows for Native students and those who want to learn about Native American culture.

Native-centered housing: Residential programs allow Native students to live together in a close-knit network that supports Native culture and history—the University of California, Berkeley, Washington State University, and Colorado College.

Native fraternity or sorority: There are Greek organizations focused on Native culture. Alpha Pi Omega Sorority is the oldest historically Native American sorority and has 20 chapters across the country. Phi Sigma Nu is a Native American fraternity with 13 chapters, with almost 400 brothers representing more than 55 tribal nations.

Native majors or courses: Some institutions offer coursework, minors, or majors focused on Native Hawaiian, Alaska Native, American, and Indigenous studies. Examples include American Indian studies at Arizona State University, Native American Studies at the University of Oklahoma, and American Indian Studies at the University of North Carolina at Pembroke.

Native student organizations: These organizations often provide student-led community support, advocacy, and cultural programming to campuses so Native American students can maintain and promote their cultural identity. Membership in all organizations and clubs is usually open to all interested students.



Recruitment programs: Many institutions, including the University of Oklahoma, the University of Arizona, and the University of Miami, offer programs such as Native SOAR and Upward Bound specifically to recruit Native students.

Questions to ask colleges about Native-specific services:

Can you connect me with Native students who can share their experiences?

What programs are available to help Native students transition to campus life and thrive there?

Are there housing options for Native students to live together?

Are there any Indigenous studies classes I can take or Native studies majors I can pursue?

Types of Higher Education Institutions



Two-year college: College offering programs that last up to two years and lead to a certificate or an associate degree.

University: A postsecondary institution composed of undergraduate, graduate, and professional colleges, all offering degrees.

College: An institution of higher education that grants degrees and certificates. The term also names the colleges within a university, such as the College of Education or the College of Engineering.

Community college: Two-year college offering associate degree programs that prepare you to transfer to a four-year college or a specific career.

Four-year college: College offering degree programs that lead to a bachelor's degree.

Liberal arts college: College offering a broad base of courses in the liberal arts, including literature, history, languages, mathematics, and life sciences.

Online/distance learning: Online programs that let you earn an associate or a bachelor's degree—or just enjoy a course.

Private university: An institution that relies mainly on tuition, fees, and private sources of funding. Private donations can sometimes mean generous financial aid packages for students.

Public university: An institution funded by local and state governments, usually with lower tuition costs than private colleges.

ON COLLEGE CHOICE:

Mikaela David-John: “I chose my college for financial reasons. I went with the school that offered me the best financial aid package, but the school had no support structures for Native students.”

Brook Thompson: “I should have looked at which colleges had Native American Centers because that was a big key to my success in college.”

Marshand Vasquez: After realizing his first university was private and had a very small Indigenous student population, he transferred to a tribal college. “Oh man, I love tribal colleges! Tribal colleges; I’ll push them on everybody. Tribal colleges are good and resourceful. The inclusion here, the Indigenous research classes, the language classes, and beading classes... you can’t do those at other colleges! It’s home here!”

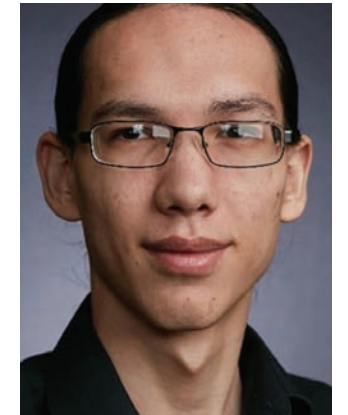
Danielle Arpan: “I wanted to be close to where my home is, which is the Black Hills of South Dakota. I was also looking for a school that had a great Native American community because I went to a Native American boarding school, and I wanted to be around that. We have our own Native American student center, and it’s like its own building and they have a lounge and free printing and study space, and sewing room, and beading room and a drum room, and I feel like it’s very supportive. So that’s a really important thing you need; it’s nice having a Native community at your school.”

Tsali Smith: “Community College is a great idea! It’s a significantly cheaper price than you can transfer on to a larger university.”

McKalee Steen: “Not only do you deserve to be in these spaces, but your university should be honored that your there. If they’re not going to be honored and appreciate your presence, then they don’t deserve you! So not only do you deserve to be in these spaces, but these spaces deserve you! These spaces need us; they need Indigenous thinking, and they need us... not only to decolonize these spaces but to Indigenize these spaces.”



Brooke



Tsali



Mikaela



Marshand



McKalee



Danielle

COLLEGE APPLICATIONS

Helpful Tips

- Understand the eligibility and criteria of applying and getting admitted to college.
- Apply only if you are eligible. Read all the scholarship requirements and directions carefully.
- Complete the applications. Do not leave any questions blank.
- Neatness counts. Always type your application.
- Write an essay that makes a strong impression. The key to writing a strong essay is to be personal and specific.
- Watch all deadlines. Make sure to plan enough time to take the application to the post office.
- Keep a backup file in case anything goes wrong. You can also use most of the same information from one application to another. This saves time.
- Proofread the entire application carefully. Ask a teacher or parent to proofread it as well.
- Ask for help if you need it. Call the funding organization to get information and helpful advice.

Extracurricular Activities

A list of extracurricular activities provides people who don't know you a broader picture of who you are outside of the classroom. Many institutions will often base their acceptance decision on looking at your holistic self-meaning. They want to get an overall view of you as a person that includes your strengths, interests, skills, and potential to grow as a student.

These are some skills and attributes that you may have and want to include:

- Responsibility: Helping your family with chores, babysitting your siblings and cousins.
- Cultural Identity: Participating in ceremonial dances or powwows, singing in a drum group, helping out at traditional feasts or ceremonies, serving as a tribal or organization princess or representative.
- Musical or creative skills: Playing an instrument, dancing (ballet, jazz, tap, contemporary), singing in a choir, or acting in community plays.

- Time management skills: Working at a part-time job while keeping up with schoolwork.
- Compassion: Volunteering at hospitals, shelters, or community centers.
- Teamwork: Being a member of a sports team.
- Leadership skills: Serving in student government or as an officer for a school club, serving as a leader in your Native American Club, Student Council, UNITY Council, or tribal youth organization.

COLLEGE FAIRS

College fairs are excellent gatherings of college representatives searching for the right students to attend their institutions. These representatives share information about their institutions and want to talk to you about attending their college. These college fairs are often held at high schools, local conference centers, or local community centers. The representatives are from colleges across the country but will mostly be from colleges in your local area and state. These representatives can provide you with a comprehensive arrangement of information about their colleges, including dorm life, athletics, academic programs, and college requirements. Ask your high school counselor about college fairs that are you in your area.

Before you go:

- Find out which colleges will be there: make a list of colleges present that you want to know more about while you are there.
- Research colleges before you go: write down questions that haven't been answered so you may ask them to the representatives.
- Bring a bag to hold all of your brochures, pens, and flyers you will receive. College fairs always have tons of free items from colleges and universities.
- Be ready to provide information to the representatives like your email address and home address.

While you are there:

- Introduce yourself. Smile and shake hands and be prepared to tell the recruiter who you are and what your plans are.
- Visit booths and ask questions: Some good questions may be "What makes your campus special?" or "How many Native students are enrolled at your institution?"
- Take notes and jot down important points about the colleges. You may want to use your cell phone to keep these notes.
- Ask about information sessions or recruitment programs at each college.
- When you return home:
 - Ask yourself which colleges stood out and why
 - Organize the items you received and review them for what you like and want to know more about.
 - Do more research on the colleges that interested you. Explore their college website, and feel free to reach out to the recruiter to schedule a campus visit.



COLLEGE VISITATIONS/TOURS

Acing Your College Visits

College visits are tremendously helpful in making that all-important decision about where to attend. They can also signal your interest in schools. But before just jumping in the car and hitting the road, it's well worth the effort to make sure that each campus visit rates an A+.

You've read all the brochures. You've explored the websites. You've talked to friends. But how will you ever decide? Many high school counselors recommend college campus visits. College admissions officers echo that advice. There is nothing like seeing and experiencing first-hand what a college has to offer. If you're going to invest your time and money in a college visit, how can you make the most of it?

Do Your Homework First

A productive college visit begins before you leave home. The school's website provides important information about signing up for official campus tours and other options for applicants. Some schools will let you sit in on classes, spend the night in a dorm, or visit with a professor. If you don't see these options listed, contact the school as they can often be arranged. Ideally, you will be able to visit the school while it's in session, so there will be many activities on campus. Once you have a date scheduled, check the school's social media to see what's going on while you're there. Perhaps you can attend a play, sporting event, or lecture.

One more piece of homework; develop a list of questions. Be prepared to talk to other students, admissions and financial aid staff, and professors. Even if you don't have scheduled appointments, opportunities may present themselves. Show them you're ready!

Take the Official Tour

If you've done your homework, you registered in advance for your tour. This is important, and not only from a planning perspective. Increasingly, colleges are keeping track of applicants who visit their schools. Your visit is considered a demonstration of your interest, which is sometimes a factor in the admissions process.

Once you've arrived on campus, show up for your tour (Early, of course!) and introduce yourself. Your tour guide is a great resource and would welcome questions about campus life. It's also enlightening to talk to other prospective students on tour. What interests them about this school? What do they want to study? Why here?

Explore on Your Own

After the official tour, it's time for one of your own adventures. Have a map and a list of all the sites you want to make sure you see. Stop by the student center and read the flyers on the bulletin boards. See what meetings or events would appeal to you. Pick up student newspapers and every publication you can get your hands on; these will provide you with insights into campus activities and attitudes. Go to the library and imagine yourself studying there. Check out the gym and browse the bookstore.

After all this walking, you're probably hungry. And that's great because you don't want to leave campus without checking out the food. Most campuses have various dining options, and hopefully, some will accommodate your tastes and dietary requirements. While you're enjoying lunch or a latte, strike up a conversation with students at the table next to you. They can share priceless insights about the school.

Keep it all Organized

Campus visits are exciting and overwhelming. A lot of information comes at you quickly, and if you visit several campuses, it can all start to blur. To keep it clear, take notes during campus visits and lots of pictures, too. When appropriate, consider recording information sessions.

As soon as possible, write down your impressions of the school. What did you like most about it? What surprised you? What disappointed you? Create pro-con lists. Your reflections are going to be incredibly valuable when those acceptance letters start arriving in your inbox.

- Visit colleges to explore what they offer. If possible, visit a range of local colleges – large, small, public, private, tribal - and decide what fits your needs.
- Talk to key staff members as the professors, students, the Native American center of the Multicultural Center.
- Contact the admissions office to set up a tour or inquire about the interview process and schedule an interview.
- Suppose one of both of your parents did not attend college. In that case, you could be eligible for first-generation services like TRIO or Upward Bound. They are designed to assist in your transition to college, and some programs offer financial assistance.
- Get connected with the Native American or Multicultural Center. They may offer services or programs specific to your identity and will most likely connect you to scholarships.

"If you do visit, and do the guided tours, make sure you also take your own tour. So, if you're going into engineering, go into the engineering building. Because what I learned when you go on the guided tours, they want to show you their nicest dorms and nicest buildings and the things that are just newly built."

Brooke Thompson

"Do it your junior year. If you visit earlier, it's better. Take advantage of this digital world too."

Marshand Vasquez

Paying for College



For many students, college may seem too expensive. By investigating college costs and how to pay for them, you'll discover that higher education is within your reach. College costs vary, and the highest cost is usually tuition, which is the price you pay for classes.

Additionally, you'll probably have to pay fees to enroll in and attend a college. Other costs include room and board, books and supplies, transportation, and personal expenses. You should also think about the cost of going home for family and community gatherings if you attend college away from home. Just like tuition, these costs vary from college to college, but there are ways to save money on them.

Financial aid is money given or lent to you to help you pay for college. It may be awarded based on your financial need or based partly on factors such as academic standing or athletic ability. Most full-time college students receive some form of financial aid. The financial aid application (FAFSA) process usually has forms, deadlines, and requirements. You don't have to be admitted to a college before you apply for financial aid.

Completing the FAFSA allows you to be considered for the most significant amount of financial aid from federal, state, and college sources—and it's free to fill out at fafsa.ed.gov.

Search and apply for tribal scholarships: Your tribe may award scholarships based on need or merit. You may have to submit a financial need analysis form or a copy of your financial aid package. Contact your tribal office or department for more information.

Remember, it's your responsibility to meet deadlines. You must submit your applications on time to qualify for financial aid. Financial aid resources are limited and, in many cases, are awarded on a first-come, first-served basis.

TIP: Keep in mind that a college that charges high tuition might offer you generous financial aid. It might even be more affordable than colleges that charge lower tuition. So, think about net price, not published price—and don't be afraid to apply to colleges you think you can't afford.

Planning can lower your college costs

You can help lower the cost of your post-secondary education by making strategic choices in high school. Map out your high school course selections thoroughly and leverage opportunities such as dual credit, advanced placement, and youth apprenticeships to lower your overall college costs.

- Complete classes that get you closer to your career goals. Most colleges require several years of English, mathematics, social studies, science, etc. Strategically choosing high school classes can help you meet college entry requirements and possibly even allow you to bypass required general education courses once you start college.
- Dual credit is a program that allows high school students to take a college-level course right at their high school. Students earn both high school credit and college credit at the same time upon successful completion of the course.
- Advanced placement allows high school students to study college-level material in various subjects and take achievement exams to earn college credit. Students may receive credit, advanced placement, or both at most colleges, depending on exam scores.

Choose your college wisely

Out-of-state tuition costs are typically more than double in-state tuition costs, so attending college within your state can save you a bundle. If you know what you want to major in before starting school, you can more accurately plan. Suppose you have a clearly defined occupation in mind. In that case, a degree from a two-year school or technical college might accomplish your end goals more affordably than one from a four-year institution.

You can find information about whether the cost of a specific college is low, medium, or high by using the College Scorecard website. Keep in mind that a higher-priced school might have more financial aid available to help you pay for your education, so look at the school's net price if you want to know how much it might cost you after financial aid is taken into account.

Set yourself up for success

So when do you begin thinking about how to finance college? Experts agree that it should be part of the conversation from the beginning. There's no substitute for planning—the more prepared you are to address the sticker price, the better positioned you are for success. And when you consider the costs, use a wide lens: You will have to pay for more than tuition. Other costs include course-required textbooks, transportation, any devices or software you'll need, plus room and board if you're looking at an on-campus experience.

Consider your options

Do you want to go to a private college or public university? Big or small school? Close to home or far away? All of these factors have financial implications. One option that can offer time to (1) save money and (2) select a major and a four-year school: Go to community college first, then transfer after earning a two-year degree. If you choose this route, it's essential to keep in touch with an academic counselor to ensure you don't lose any valuable credits when you transfer. In some states, community and four-year colleges are now working together to provide more seamless pathways for students who transfer with an associate degree.

Wherever you decide to begin your college career, you also have options for charting your course. Sometimes students choose to fast-track their education and graduate in three years to condense college costs, rack up less potential debt, and jump into the job market sooner. While this approach requires proper planning, it can be the right fit for an organized, disciplined student. On the other end of the spectrum, it's always an option to take – and pay for – fewer credit hours at a time to free up your

schedule, work outside of school, and/or handle any family responsibilities.

No matter what, file your FAFSA

To get a realistic view of what may be possible for you on the financial aid front, a critical first step is filing your FAFSA (Free Application for Federal Student Aid). The FAFSA takes into account your basic financial information to determine how much you will be able to contribute to your college education and how much you will need to source through other strategies – for example, scholarships, grants, work-study, work outside of school, and student loans (if you decide to borrow).

Do your homework

In addition to college money you can generate through financial aid and work, there are other ways to raise college money and cut costs, including:

Research scholarships and grants.

College scholarships and grants are offered every year from hundreds of sources. You can learn about them through search engines such as fastweb.com, scholarships.com, and scholarshipmonkey.com.

Look into testing out.

If you're a strong student, one way to reduce your credit hours and higher education tab is by testing out of classes with Advanced Placement (AP) test scores. It's ultimately the school's decision, but you may earn credit for what you've already learned or get the go-ahead to skip the equivalent college course. Another possibility is accumulating course credits by taking the College Level Examination Program (CLEP). According to CollegeBoard.org, CLEP exams cover intro-level college course material in 33 subjects. A passing score on just one CLEP test can save you more than 100 hours of class time and hundreds of tuition dollars.

Adarius Begay: "Get your documents secured and processed early."

APPLYING FOR SCHOLARSHIPS

When it comes to preparing for college, at the top of your priority list should be applying for scholarships. Scholarships are free money available to you to provide financial assistance on your college journey. There are many scholarships available, and every little bit of funding helps, so do not discount even seemingly small scholarships. There is no penalty for applying for scholarships, so apply to as many as possible.

These are a few tips to consider when applying for scholarships:

- Start your search early, so you have plenty of time; the extra work is worth it for money that does not have to be repaid.
- Look into organizations you're connected with to see if they offer scholarships. These can include UNITY, your church, your high school National Honor Society chapter, and your local 4-H chapter, for example.
- Ask your parents if their workplaces or civic organizations offer scholarships. If your parent(s) work for a tribal casino, there are scholarships just for students like you.
- Talk with the financial aid office at the college you will be attending for help with your scholarship search. There will be scholarships available only to students attending your college, and you should qualify for these.
- Work with your school counselor on how to search for scholarships and which ones you should apply for.
- Reach out to your tribal higher education department to apply for their higher education scholarships for tribal student citizens like you. These are great scholarships and can be utilized each year of your college journey, including graduate school (for some tribes).
- Google Search for Scholarships using keywords like 'Native+Scholarship+College' or 'American Indian+Scholarship' or 'STEM+Native+Scholarship.'
- AISES provides excellent scholarships for Native American students going into the STEM fields, including special scholarships available only to incoming freshmen (like you). Be sure to become an AISES Member (it's free) and be informed about all of our scholarship opportunities and updates. AISES Membership link: https://aises.site-ym.com/general/register_member_type.asp?%20. AISES Scholarship Link: <https://www.aises.org/students/scholarships>

Scholarship List: Utilize this list to include the top scholarships you feel you are a good candidate for. Keep it on hand to stay up to date with all of the items needed for the application. Remember to pay attention to requirements and deadlines!

| Scholarship Name | Special Requirements | Deadline | Date Submitted |
|------------------|----------------------|----------|----------------|
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Scholarship Resources for Native students:

- College Board Scholarship Search - [Collegeboard.org/applyforscholarships](https://collegeboard.org/applyforscholarships)
- American Indian Services Scholarships – www.americanindianservices.org
- Udall Undergraduate Scholarship – www.udall.gov
- American Indian College Fund (AICF) - <https://collegefund.org/students/scholarships/>
- American Indian Graduate Center (AIGC) – aigcs.org
- Indian Health Service Scholarships - <https://www.ihs.gov/scholarship/>
- Cobell Scholarship – cobellscholar.org
- Free Application for Federal Student Aid (FAFSA) – fafsa.ed.gov
- AISES - <https://www.aises.org/students/scholarships>

- ◆ **TIP:** Get Organized! Mark all scholarship due dates on your calendar.
- ◆ **TIP:** Create a folder to contain all the documents that you need to apply for the scholarships on your list. Scholarships often ask for the following documents: Transcripts, Essays, Letters of Reference, Resume, Certificate Degree of Indian Blood (CDIB).





WRITING YOUR PERSONAL STATEMENT

When you complete your college application, you will most likely be asked to provide a personal statement written in essay form. This essay allows college admission officers to see you and your personality beyond test scores and grades. Not only does your essay let admission officers get a broader sense of who you are, but it also provides you a chance to showcase your writing skills. As you begin writing, remember that colleges are looking for students who will bring their unique viewpoints to the campus. They want to know how you and your unique perspective can make a difference on their campus. Check out these other tips as you write your essay:

Follow the directions of the essay:

- Stay within the word or page limit. Keep your focus narrow and be concise with your content.
- Answer the questions thoroughly. Don't try to cover too many topics, and be sure to answer the questions to the best of your ability. Do not leave any questions blank or short.

Keep your essay personal:

- Your essay reveals your personality. It gives admissions officers a sense of who you are while showcasing your writing skills.
- Be yourself! Do focus on one aspect of yourself so readers can learn more about who you are.
- Do share your personal story and thoughts. Take a creative approach and highlight areas that are not covered in other parts of the application.
- Do include specific details, examples, reasons, and thoughts to develop your ideas.

- Colleges are looking for students who will bring their viewpoint to classroom discussions and the campus. Use your writing to describe what you'll contribute to the campus community.

Demonstrate your skills, interests, and strengths:

- Commitment: Participating in community or cultural events regularly.
- Responsibility: Helping with siblings and cousins, maintaining household chores, taking care of grandparent(s), or holding a part-time job.
- Determination: Being a member of a sports or academic team.
- Leadership skills: Holding a position in student government or as an officer for a school club or organization.
- Compassion: Volunteering at local hospitals, nursing homes, shelters, or tribal community centers.

Let your cultural identity shine:

- Your cultural identity is valuable, and sharing this will allow the admissions officers to see your values and interests.

- Consider how your Native identity informs your perspective and career path.
- Do not be afraid to explain your unique identity, including your tribe(s), clan(s), and community connections such as "self-identifying as Kiowa, fantastic at physics, and a nephew." All demonstrate who you are and how you will carry yourself in college.
- Share your experiences in your story. If you sing in a drum group, help cook at your ceremonial feasts, or enjoy dancing in ceremonies, be sure to tell these parts of your life. These experiences have shaped you and make you unique.
- Are you planning to help your community in any way through your degree? Do you plan to support your tribal community through your studies? Do you feel that your cultural identity provides you strength as you enter college? Write about it and why it is important to you.

Proofread your essay:

- Do not turn your essay in without proofreading it.
- Ask a teacher or parent to help, and be sure to read your essay aloud, as this also helps.
- Do not rely on your computer's spell check to catch all errors.

TIP: Be sure to meet with your mentor to ask if your personal statement sounds like you-if it doesn't communicate who you are, ask how you can enhance your goals or story.

TIP: Talking about yourself can be difficult, but it is essential to advocate for yourself and let your brilliance shine to the admissions committee.

Brooke Thompson: "Realize that whoever is reading these applications is also reading thousands of other student applications. Look for what makes yours stand out. Take into consideration what other kids are probably writing, and how your perspective is unique and why they want you at that school."

Tsali Smith: "Always save your essays! You can save so much time, especially if you are applying for (multiple) scholarships."

Mckalee Steen: This is an opportunity to highlight something that the rest of your application does not highlight. It's your opportunity elaborate on something that the rest of your application does not show. It's an extra opportunity. You have to think about your life experiences; picking a specific theme is good. Also, use your personal essay to tie together the rest of your application."

Danielle Arpan: "It's not a bad idea to put negative things in there. I had the experience and I learned from it and now that you know how to overcome difficult situations, not only have you had a difficult situation, but you had to persevere through it. They want to make sure that you might not have all the tools yet, but you have the ability to overcome and not get stressed out because you will."

Tsali Smith: "You want to start shaping your narrative. Know your goal and focus on that goal. you share your narrative; it needs to come across as genuine. Understand yourself and share both yourself as an individual in an honest and genuine way."

Marshand Vasquez: "Just start writing and go with the flow! Don't let your ideas roadblock you, and then go back and go over it."

LETTERS OF REFERENCE

When you apply for a job, a scholarship, or an internship, you will often be asked to provide a letter of reference or a letter of recommendation. This specific type of letter is a letter written for you and about you from a trusted individual in your life who can testify to your skills, achievements, character, and more. TIP: All AISES Scholarships require two Letters of Reference.

Be sure to select someone who can know you well. The following types of people may all be able to write a letter for you:

- Past and present supervisors can speak to your professional abilities, work, internship, or volunteer experiences.
- Faculty members/professors/teachers can speak to your academic abilities and class involvement.
- Mentors, including coaches, who can also speak to your abilities, character, and accomplishments.
- Do NOT use people who know you only in a social setting, such as family or friends.
- If you need multiple references, select people based on their ability to showcase your different experiences.

Tips when you request a Letter of Reference:

- Be sure to read all details of the application so you can best inform your references of this information.
- Inform them what the letter of reference is for – a scholarship, a job, an internship.
- Be sure to inform them of the due date - when they must submit or send their letter of reference.
- If they haven't seen you in a while, it may be good to provide the reference with an updated list of your accomplishments, your career goals, and any awards you have received.
- Inform them if the letter needs to be sent as an electronic submission or a traditional mail-in letter.
- Do send a thank you note/email to let them know that you appreciate their time and support.

MENTORS

Many successful Indigenous students who have graduated from college often share stories of a mentor who helped them during their college journey. A mentor is a person (usually a trustworthy adult or an older student) who you can count on to answer your questions about college and can be there to guide you along your journey.



How can I find a mentor?

A mentor may be a high school counselor, a parent, an aunt or uncle, an older sibling, or a cousin. You can seek out mentors through your school, extracurricular activities, your job, or your community centers. There are very few Indigenous people who have made it to the professional level in the STEM field. However, these persons would all make wonderful mentors because they have gone down the same path that you aspire to take. TIP: If you can attend an AISES event like the Leadership Summit or National Conference, you will be able to meet many potential mentors.

What can a mentor help me with?

- Mentors can give you perspectives on how to move forward and help you to navigate the next steps to take on your journey.
- They can help you with your life plans beyond college and introduce you to their college or professional networks.
- Can provide you a perspective from their lived experiences to help make moving forward in your college journey easier.
- They can talk to you and offer advice about your career aspirations, academic challenges, and life goals.

Whomever you chose to help you, it is most vital that you have someone to help guide and mentor you during this time. But always keep in mind that mentors offer great advice, but they don't decide your path- that is up to you.



YOUR FIRST YEAR OF COLLEGE

As you begin your freshman year, there are some essential things you need to know. First of all, you will most likely be the only Native person in the class, especially in your science classes. In actuality, you may be the only student of color in the class.

It will be challenging at times. There will be times when you question do I belong? Am I smart enough to be here? Will I have enough money for my lab book? This is okay, and you will get through this. It will be tough, but remember that you descend from strong and resilient people and you can do this!

Also, most campuses have supportive Native American student programs and organizations on campus- seek out those groups. These programs and student organizations will provide you support and a home away from home with other Native students who also are missing their communities. You will need support and friendship from others as no one can do things well on their own. So take comfort in these support systems and you will find that it will be much easier as you go along your college journey.

And always remember that you are exactly where you need to be, and there are people to help you and guide you on this journey. The following are some important tips on how to thrive in your first year of college:

- Utilizing the resources on campus: As a college freshman, the campus will not only be the place where you attend classes and labs, it will also be your home for the next several years. As an Indigenous student away from your home and tribal communities, so be sure to get acquainted with your new surroundings and follow these tips on how you can make the most of campus life experience.
 - Learn your way around: Use your class schedule to locate the academic buildings (including labs), and be sure to locate the dining halls, the library, and the student union. Also, be sure to find the Native American student resource locations such as the Native Student Center (if your institution has one) and your Native American Director of Support Services (if your institution has one).
 - Keep up with campus life: Read your college newspaper, attend campus events, and participate in activities organized by your dorm or by special interest clubs. Many organizations and clubs will have information sessions and campus booths in the first week of classes, so be sure to learn as much as you can.
 - Learn your school's history: Many colleges have fascinating traditions and some famous Native American alumni, so learn all you can.
 - As a STEM student, you will probably spend many hours in laboratories that go beyond your class hours. Please plan accordingly to allow for these times in your weekly schedules.
- Know your campus Student Support Systems and utilize them. These are a few:
 - AISES Chapters
 - Native American Student Organizations
 - Minority Engineering Programs
 - Diversity Offices on Campus
 - TRIO Programs
 - Tutoring Services
 - Fraternities & Sororities

Tips: Here are some valuable tips to be successful in your first year from AISES members who have been in your moccasins.

Adarius Begay: *“Be careful with not stacking too much on yourself. Just taking moments to reflect is very important. It is important to take time for yourself.”*

Brooke Thompson: *“It’s okay to say no to things. It’s okay NOT to be the president of five different clubs. It’s okay to just focus on two or three of them. You can’t help other people unless you’re helping yourself out first.”*

McKalee Steen: *“I think the biggest thing about self-care is intentional. For me, I took Friday nights off. It didn’t matter what- Friday nights were my time for myself. I think you have to be really intentional with your self-care.”*

Danielle Arpan: *“You can’t just go, go, go! Eventually, it will catch up with you. Just go to your dorm and just sit there and take a second to do that. It doesn’t seem like doing that for ten minutes would make a difference or would help, but it does.”*

McKalee Steen: *“Ask for help! If you need to take advantage of your university’s counseling services, do it! It’s a very personal choice and decision, but I definitely took advantage of my university’s counseling center and it definitely made a world of difference for me. And especially that first semester, that anxiety got to a point that freshman year, where I knew it was not healthy and I had to find ways to cope. And there’s nothing wrong with asking for help and seeking out those services.”*

Marshand Vasquez: *“Find your writing center and utilize it. They are there for a reason and they help.”*

Mikaela David-John: *“Seek out TRIO support services for first generation students; there’s a lot of specific support services there for tutoring. Seek out those services your first semester.”*

Danielle Arpan: *“Socialize! Join organizations and stuff-that is something that definitely saved me. It made me form a family.”*



Adarius



Mikaela



Brooke



Tsali



Marshand



McKalee



Danielle

Go-Do it!

Now that you have your plan of action, you must now get to work and follow your plan. You can do it, and you will have fantastic support along the way, but always remember to be aggressive with your plan and update it regularly. Here are some extra tips to follow as you keep working towards your goals:

- Modify personal, college, and career goals as you learn and grow; adapt your classes and experiences as needed. It's OK to change things as needed; just be sure to keep going!
- Be aggressive with your plan and update it regularly – keep a copy of your plan where you will see it daily. This will help to keep you focused and determined and will also let you see how far you have gone as you push along on your pathway.
- Research and reach out to professionals in the field you are interested in for advice and guidance; there are great mentors. It's fine to reach out for help!
- Connect with other students who share the same goals as you. Study groups, cohorts, and a strong network of support and community are vital for you. This type of support can and will make your journey smoother-we always work better with a group.

AISES hopes this guidebook opens the necessary paths for you to navigate and that your career journey is full of great mentors, exciting learning moments, and many doors of possibilities and opportunities. Always remember that you are exactly where you need to be along this journey. Good luck!



College Glossary

As you continue along your academic journey and you have decided to go to college, here are some key terms and phrases that you will need to know.

Admission Tests: These are tests designed to measure students' skills and help colleges evaluate how prepared students are for college-level work. The ACT and the SAT are the two standardized admission tests used in the United States.

Associate Degree: This is the kind of degree you receive at the end of a two-year college program. Most often, these are awarded at tribal colleges and community colleges.

Audit: An arrangement allows a student to attend the class as a "visitor" with the instructor's approval. You will be enrolled in the course, but you won't receive credit.

Award Letters: These are documents that state the college's financial aid offer. They detail the types and amount of financial aid, what is required to maintain the award, and the deadline for accepting the award.

Bachelor's Degree: A four-year degree awarded after completing 120-semester credits (approximately 40 college courses).

College: An institution of higher education that grants degrees and certificates. The term also names the colleges within a university, such as the College of Engineering or the College of Fine Arts.

Certificate of Indian Blood (CIB)/Certificate of Degree of Indian Blood (CDIB): An official US Government document that certifies an individual has a specific degree of Native American blood of a federally recognized Indian tribe, band, nation, pueblo, village, or community. The CIB and CDIB are issued by the Bureau of Indian Affairs (BIA).

College Credit: Credits are measured in terms of credit hours. Credit hours are granted after passing a college-level course. One credit hour equals one hour in class per week. You will need a certain number of credits to graduate with a degree.

Common Application: A standard application form accepted by 700 colleges. You can fill out this application once and submit it to any one of the colleges that are members of the Common Application Association.

Community and Technical Colleges: These schools offer associate degrees and certificates and prepare students for specific trades.

Concentration: A specific area of emphasis within your chosen major. Colleges do not usually require you to declare a concentration. However, they are used as an optional tool to help you customize your college experience.

Cost of Attendance (COA): The total amount will cost you to go to college each year.

Deferred Admission: When there is not enough room for an admitted student in the class year they applied for, a college can defer the student's access to the following year's class.

Early Action (EA): This is an option to submit your application before the regular decision deadline. These options usually have an October or November deadline, with decisions released by mid-December. Unlike early decisions, early action is not binding. Some colleges use restrictive early action, which means that you cannot apply early action to other colleges although they are not binding.

Eligibility: Criteria determined by a group or organization to satisfy requirements for an award, scholarship, or status.

FAFSA: The Free Application for Federal Student Aid. This is the standard form that all students and their parents/guardians must complete to apply for federal and state need-based assistance/and programs and some campus-based assistance/aid. The FAFSA is required for all students seeking federal student grants, work-study programs, and loans.

Full-Time Enrollment: A student is considered full-time when enrolled in at least 12 quarter or semester credits each term. To be regarded as a full-time graduate student, this status often means you must be enrolled in at least nine quarter or semester credits each term.

Fly-in Programs: These are free summer and fall visits for underrepresented and diverse students seeking to visit colleges to get a better overall view of the institution. More than 65 colleges offer fly-in programs; be sure to contact the college to see if it is offered.

Gap Year: This is a yearlong break between high school and college or between college years. This time is often used for traveling, clarifying goals, building resumes, volunteering, participating in an internship, serving the community, or developing areas of interest.

Graduate: A student who has earned a bachelor's degree and is pursuing additional education in a specific field.

Grant: This is funding that you receive for college and do not have to pay back.

Half-time Enrollment: A student taking fewer classes than full-time (usually 12 credit hours) is considered half-time status. Most scholarships require students to attend full-time.

Major: The field of study that a student focuses on during the last two years of studying for their degree.

Letter of Recommendation: These are letters written for you and about you that are used to recommend you for a scholarship or admission to a college or university. These letters are written by trusted individuals like a teacher, counselor, mentor, or employer.

Loan: A loan is money that is borrowed and must be paid back with interest. This money is borrowed from the government, a bank, or another source.

Minor: The area of study that typically supplements a major.

Need-based Aid: Financial aid (grants, scholarships, loans, and work-study opportunities) given to students when their families cannot pay the total cost of college. This is the most common type of financial aid.

Net Price: The actual amount of students will pay for college.

Networking: Exchanging information or services with individuals, groups, or institutions; specifically, building productive relationships for employment or business. Networking is often done at college fairs and conferences.

Open Admission: A policy of accepting any high school graduate regardless of their grades until all spaces in the incoming class are filled.

Pass/Fail Courses: These are college courses that are not graded with letter grades or grade points, only “pass” or “fail.” Pass/Fail course evaluations do not count toward the student’s GPA.

Quarter System: This system divides the academic year into three quarters: fall, winter, and spring. The fourth quarter, the summer session, gives students the chance to take more classes and possibly graduate early. A typical quarter lasts ten weeks, and students usually take three courses per quarter.

Retention Rate: Percentage of a college’s full-time, first-year students who continue to the following year.

Resume: A document that showcases a person’s educational background and skills for acquiring employment or supporting documents to an application. AISES scholarships require a resume.

Rolling Admission: An admission policy that gives students a large window of opportunity to submit their application materials as the material becomes available.

Safety School: This is a school that you know you will be accepted into and may be considered a “backup” if your other school choices do not work out.

Scholarships: Funds to help pay for college that are awarded for academic or other achievements.

Semester System: This system divides the academic year into two 15-week sessions: the fall and spring semesters, with a winter break. About 90% of colleges in the United States run on the semester system.

Student Aid Report (SAR): A report sent to your family after you submit the FAFSA. It reports your expected family contribution (EFC).

Tribal Scholarships: Scholarships and financial assistance provided by a tribal education office to support eligible tribal members pursuing a postsecondary degree.

Vocational or Trade School: Colleges offer specialized training, skills, or education for specific skills, such as plumbing, carpentry, etc.

Waitlist: This is a list of students whom a college has not officially accepted but may offer admission if space becomes available.

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For 45 years, AISES has focused on substantially increasing the representation of Indigenous peoples of North America and the Pacific Islands in critically needed STEM (science, technology, engineering, math) disciplines. This robust nonprofit currently supports individual student and professional members across the U.S. and Canada through chartered college and university chapters, professional chapter, tribal chapters, and affiliated PK-12 schools. Members benefit from diverse STEM-focused programming that supports careers and promoted student success and workforce development in multiple crucial areas. To learn more visit [aises.org](https://www.aises.org).

NAVIGATIONAL TOOLS FOR
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