

Nickolas — Rockenback



Welcome!

My name is Nickolas Rockenback and I am a senior in the honors program at Minnesota State University, Mankato. I am currently a pre-med student majoring in biomedical sciences and minoring in chemistry.

Mission Statement

I strive to make impacts on the lives of people through medicine for communities in the United States and abroad. Through the honors program, I intend to become a well-rounded individual and healthcare provider.

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Honors Program



Mission

The mission of the Honors Program at Minnesota State University, Mankato is to create future leaders, researchers and global citizens by providing high ability and motivated students with exceptional learning opportunities, mentoring relationships, and a community of scholars that foster their development as future leaders in a global society.

Leadership

Upon graduation, honors students will have demonstrated the ability to utilize personal leadership values and guide groups toward a common goal.

Research

Upon graduation, honors students will have demonstrated the ability to exhibit information literacy skills, synthesize and integrate ideas, produce original research or creative works, and contribute to knowledge.

Global Citizenship

Upon graduation, honors students will have demonstrated the ability to exhibit second language and communication competencies and exhibit cultural competency and awareness.

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Leadership



Leadership Reflection

EMT Leadership

Sibley Park Cleanup

Cardiovascular Research

Tri-Beta: Secretary

Leadership Synthesis

Prior to the MNSU honors program, I was a student leader in a few different clubs. Most notably, I was a captain in my school's robotics team and was a leader for a small group of middle school students with their own team. A lot of my leadership philosophy started here as I found enjoyment in being a primary driver in helping my group reach our goals.

During my attendance in [Intro to Honors](#), I took a Gallup poll on my strengths as a leader and reflected on my current leadership abilities by drawing on past examples. My strengths are restorative, input, and learner. I can use these strengths as a future leader by building on them and using them for the benefit of the group. Reflecting on past experiences is the best way to improve upon present leadership decisions. I had my first leadership experience in college as a [student leader for a volunteer event](#) that annually cleans up Sibley Park. This was a small event that was a good starter for what being a leader meant outside of high school. I was able to practice my strengths with the small student group I was responsible for.

I was part of a [research team](#) working toward a common goal of obtaining data for our project. The work was independent and contact with my other partner was minimal. However, I learned to collaborate effectively with the faculty mentor and my team member without being face-to-face every week. When I discovered a better surgical technique or a reason why our rats were dying unnecessarily, I would share this information with my partner. An example of this would be when I figured out raising the rate of saline would improve survival rates. This way we can both benefit from the improved technique and our common goal of finishing the study becomes closer.

As I was performing surgeries on rats, I was hired on as an [EMT](#) in New Ulm. I drew a lot of parallels to the small research team in MNSU because once again, I was working with one other person. With my ability to identify roles within a group, I started to reflect on the actions and styles of the lead and support roles within this new team. Every partner has different strengths and weaknesses and it is important to identify these to reduce the friction on a call. For example, one partner is a terrible driver so I primarily take the support role during calls with him and drive. I also let my partner know my inexperience with critical care so we can discuss our plan more in depth before we arrive at the patient.

Through working with EMS, I have seen a wide variety of leadership styles stemming from unique ideas about how a call should be run. I can identify styles, reflect on them, and create my own by picking the best values. I learned that an effective leader creates and sticks to well-defined goals throughout a call. For example, with respiratory distress, transport comes directly after assessing and treating ABCs. An ineffective leader would spend time on the scene giving extra tests. At the beginning of my undergraduate career, I thought leadership was more about keeping discipline and giving clear commands. Now, I realize it is more about effectively working as a group toward a common goal and continuously adapting the style in time.

My experiences as a follower and lead as an EMT has helped to develop my own philosophy on leadership. Effective qualities that make up a leader depends on group size, demographics, and goals. For example, I would not speak the way I do as an EMT to a large class of elementary school children. As I transition into my role as a [secretary for the Tri-Beta club](#), I will adapt my leadership styles to fit the appropriate qualities. In my future as a leader in healthcare, I will continue to adapt and use this philosophy to become an effective provider.

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Research

[Research Reflection](#)[Neurobiologist Research Biography](#)[Biochemistry Lab Report](#)[Cell Biology Paper Critiques](#)[Cardiophysiology Research](#)

Research Synthesis

Prior to my attendance at the MNSU, I was more involved with engineering and robotics than the research process as I know now. When I started my undergraduate career, I simply enjoyed academic learning and I was a blank slate for the times to come.

Upon taking a few lower division biology and chemistry classes, I learned research is the driving force of innovation in this world. These classes, like [Cell Biology](#), also helped me improve my scientific literacy by becoming introduced to scientific writing. Upon reflection during [Intro to Honors](#), studies seem to be written in their own way and I found I had to not only understand the subject but critique the writing with respect. In an upper-division class, [Neurobiology](#), I learned a lot about citing the best sources and writing the most accurate summaries of another researcher's work. I would use this knowledge to create a lab report of my own.

I wrote a [full lab report](#) on the isolation of a protein called lysozyme from a simple cheek swab. During the duration of the lab, I had to draw upon the methodology provided to conduct experiments each week and keep up with my reports in a clean notebook. Every experiment is uniquely similar in that they all use the same methods to produce results, but all use the different techniques of the researcher. I developed my own techniques and tweaks to the methods with notes to my changes. In the writing of my report, I used my previous experiences to cite all my sources and methods.

After talking with students about their past research work, I became driven to seek out a research program that fits my goals. I reached out to many professors about joining their lab and ended up working in a [cardiophysiology lab](#) under Dr. Knoblich. The contract was for two years and involved weekly time-consuming surgeries. Each full surgery took 2-3 hours with a data collection period of another 3 hours. Since we were working with living rats, I had to learn and follow a standard ethical guideline about the storing of rats and their disposal after we were done. This was an intimidating task for a sophomore but drove me headfirst into the world of original research. Unlike previous lab reports I wrote earlier in my career; I played a part in revising my mentor's methodology and procuring unique results. I did not know the answer at the end of the tunnel while I was still in it.

After two years of collecting data, I was tasked with writing the abstract and applying for dissemination for results at Mankato and St. Cloud. The abstract was easy enough to write as we had most of the report created from a previously created grant proposal. I still needed to condense many of the parts to make an easy-to-read but still accurate representation of our study. During the dissemination of our project at the URS at MNSU, it was a challenge presenting to both students and professors because they all had extremely different levels of academic background. What seemed normal to us was very abstract to some students. This study was complicated to me, explaining the concepts and then why we were doing all of this was a unique challenge. I found it most helpful to just slow down and use a lot of common terms like high-blood pressure instead of hypertension, so the viewer did not have to wade through tides of technical jargon. My journey had started with an interest in the academic process and ended with a desire to continue with research into my career.

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Global Citizenship

[Global Citizenship Reflection](#)[Palenque Lectures](#)[Guatemala Mission Trip](#)[LEEP](#)[Spanish 101-201](#)[HONR 401: Somali Culture](#)

Global Citizenship Synthesis

I had always known the importance of becoming a global citizen because of the diverse world I grew up in. It was not until the honors program that I actually started to work toward bettering myself in this area. In [Intro to Honors](#), I found that I am apart of Midwestern and how parts of my ancestors' way of life are woven into mine. For example, I celebrate Christmas with my family even though I am not Christian because it is a tradition. In the class, I was also introduced to implicit and explicit biases that surround me.

Volunteering in the community of Mankato was a way for me to expand on my competency. I was not only able to talk with other international students from all over the global, but also with the members of the community. This was the first time I realized how individualistic my culture is and how Eastern cultures are more collective. When I helped to fold peace cranes at [LEEP](#), I had exposure to how people with intellectual disabilities lived daily. I learned how these organizations are extremely important as a way for them to connect with the community.

I had an excellent opportunity to learn more about the connections between culture and history. I attended a [series of lectures from an archeologist](#) that successfully mapped a large Mayan city in Mexico. I was going in expecting history teachings on the Natives living in Central America, but I came out of it realizing how many lessons Western history glazed over. I was always taught in my high-school education that natives had little to no technology and lived in crude tents. However, the Mayans in Palenque lived in a large city with indoor plumbing and amazing architecture that allowed them to build on the side of the Mountains. Implicit biases like the history lessons taught in elementary school are important to realize and become more self-aware.

Learning another language can provide further insights into history and culture. I never thought to take a foreign language past high school, but I am very happy I took a year and a half of [Spanish](#) in my undergraduate career. Everything from taking classes on the historical bias to anthropology pales in comparison to the perspectives a language class can offer. Learning Spanish history in Spanish offers the perspective of their culture from their point of view. Translated words and phrases will slightly taint the true meaning of what we learn. Learning an intermediate level of Spanish has opened up several doors of communication when I talk with patients as an EMT. There were instances where my small speaking proficiency has helped ease the tension that may arise in an ambulance when we are busily working on them.

My second language was extremely useful on my [medical volunteer trip to Antigua Guatemala](#). It allowed me to become more immersed in their culture and have more complex conversations with locals. I was also able to better communicate with the patients we were seeing and ask questions to help diagnose their problems. The direct conversations created more trust between our team and the people we were seeing. More trust leads to higher quality healthcare which helped fulfilled our goals of the trip.

I decided to finish my global citizenship competency with an [Honors 401](#) class that focused on Somali and Somali American literature, arts, and music helped to raise my awareness of cultures I am not able to communicate directly with. The history of colonialism is deeply rooted in Africa, and Somalia is a prime example of exploitation. I knew about the prolonged civil wars through media, but I never understood how bad the situation was or how colonialism was involved. Through the class, I was able to talk with visiting Somali authors and artists who were able to talk with us about their journeys and memories of how drastically their country has changed since the 1990s civil war. This class had provided an in-depth look into a culture very different than my own.

There were many different aspects of Global Citizenship from reflection and learning to communication and direct contact with other cultures. Through reflection, I gained vital knowledge, understanding, and experiences that helped to make me a more well-rounded individual.

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