

NICHOLAS WEIMANN

4162 Goodwin Ave N, Oakdale, MN 55128 ♦ nicholasweimann@gmail.com ♦ c: (651) 247-2496

Objective: Full time work in process or chemical engineering.

Education

Benedictine College—Graduation date: May 2020 **GPA: 3.9**

- ♦ B.S. in Chemical Engineering with a minor in Mathematics.

Hill-Murray School—Graduated June 2016 **GPA: 4.0**

- ♦ Salutatorian (top 2%) with a 4.3 weighted GPA.

Projects and Skills

Dimethyl Ether Production Concept Feasibility Design Project

- ♦ Designed a process for producing dimethyl ether and diethyl ether from a mixed alcohol stream including mass and energy balances, equipment sizing and materials, and capital and operating cost estimations.
- ♦ Reported results using process flow diagrams (PFDs), block flow diagrams (BFDs), and a written report.

Economic Analysis

- ♦ Analyzed project economics in Excel using an income/cash flow statement to find the project's net present value (NPV) and discounted cash flow rate of return (DCFRROR or IRR).
- ♦ Performed NPV sensitivity analyses considering likely variability in major project revenues and costs.

Lean Six-Sigma, Minitab, and Design of Experiments (DOE)

- ♦ Discovered statistically significant factors for coating a copper mesh with a carbon slurry using Minitab and DOE in an effort to make a battery cell for the AIChE ChemE Car Competition.

Technical Writing and Communication

- ♦ Experienced in writing various types of technical documents in clear, concise, and active voice.

CHEMCAD Process Simulator (similar to Aspen)

- ♦ Simulated an acetone purification process using absorption and stripping columns with solvent recycle.
- ♦ Modeled flow through a piping system to estimate fluid flow rates, required pipe sizes, and pressure drop.
- ♦ Determined size requirements for compressors, pumps, distillation columns, etc. for the dimethyl ether production project.

Leadership and Extracurriculars

Treasurer—American Institute of Chemical Engineers **1 hr/wk—School Year 2017-present**

- ♦ Participated in the semi-final round of the National Chemical Engineering Jeopardy competition (2019).

Altar Server Captain—Benedictine College Ministry **10 hrs/wk—School Year 2017-present**

- ♦ Provide qualified volunteers for at least 17 positions each week through recruiting, training, and coordinating a group of about 50 altar server volunteers.

Work Experience

“Computer Applications in Engineering” and “Statistical Data Analysis” Teaching Assistant
Benedictine College School of Engineering **5 hrs/wk—School Year 2017-present**

- ♦ Responsible for grading the homework and mentor students that have questions.
- ♦ Provide descriptive feedback for errors to help students learn from mistakes and improve their skills.

Head Lifeguard/Swim Instructor **40 hrs/wk—Summer 2014-present**
YMCA of the Greater Twin Cities and Ramsey County Aquatics

- ♦ Hold other lifeguards accountable to high safety standards while they are on duty.
- ♦ Maintain lifeguard, professional CPR, and several other related certifications.

Library Research Tutor and Circulation **8 hrs/wk—School Year 2016-present**
Benedictine College Library

- ♦ Explain to other students the online resources available to them through the college library.

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3 January 2020

Dear Hiring Manager:

I am actively searching for a position in process or chemical engineering. This year I am a senior studying chemical engineering at Benedictine College in Atchison, KS. I am eager to take the knowledge and skills I have learned and apply them to a variety of projects and problems, whether that is in design or continuous improvement. I believe I would quickly learn to excel in a chemical or process engineering position.

I have direct classroom experience with many of the responsibilities given to a typical process engineer. I have learned to create process flow diagrams and P&ID's in a semester long design project, and I have practice with sizing equipment such as heat exchangers, distillation columns, and pumps. For example, last semester a professor commended my design of a batch mixing tank which would be used to feed a process supply tank. I balanced operability requirements (such as allowing some dead time in between batches to allow for transport, filling time, raw material changeover, etc.) with capital and maintenance costs (by keeping the batch mixing tank as small as possible while ensuring operability). I am able to consider all of the details which may have an impact on a design and address the most important concerns (such as determining the factors which go into the required size for the batch tank to be 'operable').

I have hands-on experience with a variety of design experiments and projects as well. For example, I have experience conceptually designing control systems and understand where certain sensors or valves would be needed in a process. Last semester I designed a control system which allowed a process trainer to be used as an exothermic reactor. My professor commented that the control system I designed was the "best [he's] seen in four years" of teaching that lab. Additionally, I have an introduction to different types of sensors, meters, and valves and how they work, which would be critical for specifying their use in a process.

I hope to have provided a few examples of how I see opportunities for myself to contribute in a chemical or process engineering position. I would be glad to discuss any of the skills or experiences I mentioned here or in my resume and answer any questions you may have. I am available by phone at (651) 247-2496 and email at nicholasweimann@gmail.com. Thank you for your time and consideration.

Sincerely,

Nicholas Weimann