

Associate of Applied Science- Indoor Agriculture

This is the first northern climate, indoor growing degree program in the U.S.!

Learn different growing systems—hydroponics, aquaponics and aeroponics—and cutting edge indoor growing space design and construction, climate-control systems and facility functions.

The Indoor Agriculture program is a collaborative approach among multiple departments and academic programs to create the first known higher education interdisciplinary Indoor Agriculture program. Students will learn about processes involved in growing and developing food and/or other plants in an indoor setting - including, but not limited to: space design and construction, facility maintenance, climate control systems, plant biology, and design of different types of indoor agriculture systems (including hydroponics, aquaponics, aeroponics), chemical and nutritional makeup of different plant types, basic business and accounting practices.

Skills and Competencies

Students in this indoor agriculture program will have the opportunity to contribute diverse perspectives and become a part of the solution. In the program, students will learn about:

- Different growing systems: hydroponics, aquaponics and aeroponics
- Cutting edge indoor growing space design and construction, climate-control systems and facility functions
- Plant biology and their chemical and nutritional makeup.
- Basic business and accounting practices to manage or own an operation.
- How to reduce food insecurity, develop sustainable, pesticide-free food systems and integrate diverse perspectives to solve a growing, global food crisis.

Course Work

This degree includes the following courses as part of the program requirements, and specific major requirements along with general education courses and graduation requirements.

General Education Courses (17 cr.)

BI111	Introductory Biology: Principles (4 cr.)
EC140	Consumer Economics (4 cr.)
EN111	College Composition I (4 cr.)
CH111	General Chemistry I (5 cr.)

Technical Concentration (29 cr.)

IA101	Indoor Farming Foundations (3 cr.)
IA130	Indoor Living Environments (3 cr.)
IA220	Innovative Growing Systems (3 cr.)
IA250	Future Farmers (3 cr.)
CN278	Mechanical, Electrical and Plumbing Systems (3 cr.)
HV171	Basic Heating (4 cr.) or
HV172	Basic Refrigeration (4 cr.)
GC101	Introduction to Environmental Science (4 cr.)
GC317	Geography of Food Systems (4 cr.) or
HM205	Food and Film (4 cr.) or
HN210	Nutrition for Humans (4 cr.)
IM115	Basic Electricity for Industrial Technicians (2 cr.)

Elective Courses (14 cr.)

Recommended Courses

BI431	Plant Physiology (4 cr.)
CH189	Medicinal Plant Chemistry Seminar I (1 cr.)

Indoor Agriculture majors must achieve a grade of "C" (2.00) or higher and a GPA of 2.25 in technical concentration courses.

Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advisement Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job or undergraduate research. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

Additional Considerations

Upon completion of the Indoor Agriculture Associate's degree, students will be able to:

- Apply indoor agriculture growing techniques to various forms of horticulture
- Understand background principles of plant chemistry and plant physiology
- Apply knowledge and understanding of basic mechanical, electrical and plumbing systems to support indoor agriculture requirements
- Understand food system networks, distribution, and associated societal impacts

Job Outlook

The projected job growth is a 9 percent increase until 2029. With jobs including Farmers and Agricultural Managers having a median earnings of \$28 per hour.

Potential Careers

Indoor Agriculture Program prepares students for employment in the following areas:

Farmer

Agricultural Managers

Facility Technician and Maintenance

Plant Researcher

Business Manager/Owner

Additional Resources and Information

For Career Planning and Opportunities:
Academic & Career Advisement Center
3302.1 C.B. Hedgcock
906-227-2971
www.nmu.edu/acac

Technology and Occupational Sciences
101 D. J. Jacobetti Complex
906-227-2190
www.nmu.edu/tos
tos@nmu.edu

For Job Search, Resume and Career Information:
Career Services
3302.3 C.B. Hedgcock
906-227-2800
www.nmu.edu/careers

For Information about NMU Student Organizations Associated with this Major Contact:
Center for Student Enrichment
1206 University Center
906-227-2439
www.nmu.edu/cse

Internet Resource Links:
www.careers.org
www.bls.gov

For more information visit:
www.nmu.edu/bulletin/indoor-agriculture-associate-applied-science-1

Or Contact Kim Kolasa,
kimbersm@nmu.edu,
906-227-1529



**NORTHERN MICHIGAN
UNIVERSITY**

MARQUETTE, MICHIGAN

The Academic & Career Advisement Center
2022



What to do with
a major in...

Associate of Applied Science-
Indoor Agriculture

