

Laboratory Science Technician

Associate in Applied Science (AAS)

Overview

The Laboratory Science Technician program prepares individuals to provide laboratory support to the environmental, food processing and agriculture industries. Students will be prepared to conduct or assist in laboratory analysis of water, food, fuel, soil, drugs and other elements.

Graduates will receive a strong basis in scientific principles, quality methodology and process management skills.

Program curriculum will provide instruction in terminology, concepts and techniques used in analytical, research, quality control and processing laboratories.

Graduates will be prepared for Six Sigma Green Belt certification.

The Laboratory Science Technician program is offered at the Marshfield campus.



Program Outcomes

Employers will expect you, as a Laboratory Science Technician graduate, to be able to:

- Perform all basic laboratory functions effectively and efficiently
- Ensure quality in testing procedures
- Analyze samples
- Follow all laboratory safety procedures
- Provide testing and research documentation
- Statistical verification of testing results
- Master all basic laboratory concepts

Career Options

Food Technician
Laboratory Assistant
Laboratory and Research Technician I
Quality Assurance Technician
Wastewater Lab Technician

Potential for Advancement

Lab Manager
Laboratory Scientist
Quality Assurance Technician
Potential advancement generally requires further education.

Admissions Procedures

To apply to the Laboratory Science Technician program, please submit the following to MSTC Student Affairs Admissions Office:

1. WTCS application form and \$30 non-refundable application fee
2. Completed Accuplacer test. (Other test scores may be acceptable alternatives.) Entrance exam requirements for the Laboratory Science Technician program are:

Reading–Accuplacer score of 89 or higher or an ACT score of 19
Language–Accuplacer score of 103 or higher or an ACT score of 18
Math–Accuplacer score of 79 or higher or an ACT score of 18

If a student does not meet the required scores in these academic areas, they may remediate and retest or complete an identified structured remediation course(s) in the Academic Support Center.

3. High school transcript or GED/HSED scores

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494
mstc.edu
888.575.MSTC

Program Course Descriptions

10103106

Microsoft Office-Beginning 3 credits

Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, PowerPoint), Windows Explorer, Internet and computer concepts through demonstrations and lab exercises.

10080105

Soil Science 3 credits

The learner will learn the basic soil types and how to identify them. They will also learn the science behind testing soils for agricultural usage and environmental impact. Prerequisite: Beginning Lab Science 10506101

10152105

Database Management 3 credits

This course uses hands-on exercises and projects to give students experience with using databases for data storage and retrieval. To encourage students to become more sophisticated database users, background information, general relational database design concepts and a database security overview are included. Prerequisite: Microsoft Office-Beginning 10103106

10196180

Applied Data Analysis 3 credits

This course provides the student with the tools and skills to collect and analyze data allowing them to solve problems and improve processes. An emphasis will be placed on the use of statistical techniques to create and implement a data collection plan. Statistical techniques emphasized will be process mapping, failure mode and effects analysis, probability, confidence intervals, measurement systems analysis and hypothesis testing. Prerequisite: Introductory Statistics 10804189

10196188

Project Management 3 credits

The learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, identify project resources, implement the project, chart project progress, deal with variations, evaluate the project and use various technology in these processes.

10196189

Team Building & Problem Solving 3 credits

The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will assume the roles and responsibilities of team leadership in the stages of team development, use a systematic problem solving process and employ consensus building and conflict management strategies.

10196192

Managing for Quality 3 credits

The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identify stakeholder relationships, identify ways to meet/exceed customer expectations, apply a systems-focused approach, use quality models and tools, manage a quality improvement project and measure effectiveness of continuous improvement activities.

10506101

Beginning Laboratory Science 3 credits

This course introduces the learner to the fundamentals of laboratory procedures. The emphasis will be on lab safety, equipment utilization and maintenance. An introduction to scientific methodology will be included. Basic laboratory math will be discussed and utilized.

10506102

Environmental Lab Science 3 credits

The learner will begin to apply laboratory procedures and the scientific method to the analysis of samples and the performance of simple experiments. The learner will learn the methodology to deal with biohazardous materials. Prerequisite: Beginning Laboratory Science 10506101

10506103

Advanced Laboratory Science 3 credits

The learner will do extensive testing and analysis of samples. The learner will conduct research, studies and experiments specific to their area of focus.

10506110

Intro to Hydrology 3 credits

The learner will be introduced to the water distribution cycle. The relationship between water and other elements will be researched and tested. The critical components of surface and ground water quality will be emphasized.

10506120

Food Laboratory Science 3 credits

The learner will perform experiments unique to food processing and food safety. HACCP and biosecurity will also be covered. Prerequisite: Environmental Lab Science 10506102

10506135

Internship 3 credits

Integrates previous classroom study with specific off campus occupational experiences at selected training sites. An organized plan of experiences built around occupational competencies are planned, supervised and evaluated by the instructor and cooperating business trainer.

Curriculum

First Semester (16 Credits)

10103106	Microsoft Office-Beginning	3
10506101	Beginning Laboratory Science	3
10801195	Written Communication	3
10806114	General Biology	4
10809198	Intro to Psychology	3

Second Semester (16 Credits)

10196192	Managing for Quality	3
10506102	Environmental Lab Science	3
10801197	Technical Reporting	3
10804189	Introductory Statistics	3
10806199	General, Organic & Biological Chemistry	4

Third Semester (19 Credits)

10080105	Soil Science	3
10152105	Database Management	3
10196180	Applied Data Analysis	3
10506110	Intro to Hydrology	3
10506120	Food Laboratory Science	3
10806197	Microbiology	4

Fourth Semester (15 Credits)

10196188	Project Management	3
10196189	Team Building & Problem Solving	3
10506103	Advanced Laboratory Science	3
10506135	Internship	3
10809196	Intro to Sociology	3

Total Credits 66

Please Note:

- The Laboratory Science Technician program has August and January starting dates. However, we advise you to meet with a counselor to successfully plan your academic schedule.
- Degree completion time may vary based on student scheduling needs and course availability.
- For General Education course descriptions (800 level courses), see section marked under Course Descriptions.