



Addendum to the 2021-2022 NMC Catalog

The information contained in this catalog addendum is provided as an update and in addition to the Academic Catalog effective April 2021.

Academic Calendar Updates:

- **Summer 2022**
 - Drop Dates for 12-Week Session: Monday, May 9 – Wednesday, May 17
 - Drop Dates for 8-Week Session: Saturday, June 13 – Thursday, June 20
 - Enrollment Report Day: Wednesday, June 21
 - 8-Week Session Begins: Saturday, June 13 – Monday, Aug. 8
 - Removal of NMC BBQ on Sunday, May 23

Program Updates:

AGS degree requirement changes

- Math Competency: Changes made to the developmental math sequence will result in MTH 19 replacing MTH 23 and MTH 23 will no longer be offered.

AAS degree requirement changes

- Math Competency: Changes made to the developmental math sequence will result in MTH 19 replacing MTH 23 and MTH 23 will no longer be offered.

AAS degree requirement changes

- Math Competency: Math Explorations (MTH 120) is suitable and in some cases better suited to nursing students.

Surveying, AAS degree requirement correction

- Math Competency: *Changed from "Completion of MTH of MTH 121 College Algebra, or place higher into MTH 122 Trigonometry" to "Completion of MTH 122 or placement into MTH 141 or higher".*

New Courses:

MFG 291 – Startup Seminar.....3.0 (4)

This class provides students the opportunity to learn and experience “startup”. The course requires students to form teams around a new product or service concept and apply innovation tools such as design thinking and agile management to create new value. The resulting value proposition is pitched at a Northern Michigan’s Startup Week event. Course content includes startup concepts and processes, interviews with prior NMC student entrepreneurs, and interactions with the Traverse City startup ecosystem.

MTH 011 – MTH 111 Support.....2.0 (2)

Required Prerequisites: High school algebra and geometry.

Co-requisite: MTH 111

MTH 111 Support will focus on essential algebra skills needed for success in Intermediate Algebra. Course is for students concurrently enrolled in MTH 111. Support topics include order of operations, dimensional analysis, properties of exponents, polynomial and rational expressions, linear and quadratic equations, proportions, graphing techniques, factoring, applications, and growth mindset/college readiness.

MTH 019 – Math Literacy.....4.0 (4)

Required Prerequisites: Appropriate placement score

Recommended Prerequisites: High school algebra and geometry.

Math Literacy focuses on developing mathematical maturity through problem solving, critical thinking, writing, and communication of mathematics. It integrates numeracy, proportional reasoning, algebraic reasoning, and functions with statistics and geometry as recurring course themes. Throughout the course, college success components are integrated with the mathematical topics.

MTH 020 – MTH 120 Support.....2.0 (2)

Required Prerequisite(s): A grade of 2.0 or higher in MTH 019 or appropriate placement score

Recommended Prerequisites: High school algebra and geometry.

Co-requisite: MTH 120

MTH 120 Support will focus on essential arithmetic, algebraic, and geometric skills needed for success in MTH 120. This course is for students concurrently enrolled in Math 120. Support topics include order of operations, properties of exponents, geometry, fractions, dimensional analysis, linear equations, proportions, basic graphing techniques, applications, and growth mindset/college readiness.

MTH 021 – MTH 121 Support.....2.0 (2)

Recommended Prerequisites: High school algebra and geometry.

Co-requisite: MTH 121

MTH 121 Support will focus on essential algebra skills needed for success in College Algebra. Course is for students concurrently enrolled in Math 121. Support topics include factoring, solving linear and quadratic equations, order of operations, properties of exponents, polynomial and rational equations, set notation, functions, complex numbers, logarithms, and applications.

MTH 031 – MTH 131 Support.....1.0 (1)

Required Prerequisite(s): Appropriate placement score.

Recommended Prerequisites: College level reading.

Co-requisite: MTH 131

MTH 131 Support will focus on essential algebra skills needed for success in MTH 131. Course is for students concurrently enrolled in Math 131. Support topics include percentages, decimals, fractions, reading and creating graphs, interpreting and calculating measures of center and variation, and create and interpret

scatter plots, the line of best fit, and the slope and y intercept in context, and using statistical software. Growth mindset and college readiness will be addressed throughout the course.

Modified Courses – Credits, Contacts, Required Prerequisites, Course Description, or Course Title

AVF 111 – Private Flight.....5.0 (5)

A flight course structured to provide a minimum of 40 dual and solo flight hours to meet the aeronautical experience requirements for a private pilot. Upon completion of this course, the student will have attained the FAA Private Pilot Rating. Course requires 42.4 hours of flight time, 8.0 hours of pre/post, and 17.5 hours of ground instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$237**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 132 – Instrument Flight.....4.0 (4)

A flight course designed to meet the aeronautical experience requirements for the FAA Instrument check ride. Upon completion of this course, the student will have attained the FAA Instrument Rating. Course requires 39.8 flight hours, 9.8 hours of pre/post, and 17.7 hours of ground instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$237**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 230 – Commercial Flight I.....2.0 (2)

The student will advance their skills required by the FAA to obtain a Commercial Pilot Certificate. They will gain experience in different aircraft with the opportunity to gain a Tailwheel Endorsement or Seaplane Rating. Students will increase their instrument proficiency while conducting cross country flights. Course requires 35 flight hours, 6 of pre/post, and 7 hours of ground instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$237**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 232– Commercial Flight II.....3.0 (3)

A flight course structured to provide a dual and solo flight hours to partially fulfill the flight hour requirements for the FAA Commercial Pilot Certificate. This course will provide a review of VFR cross country navigation procedures and introduce the student to multi-engine flight. Course requires 35.4 flight hours, 3.0 hours of pre/post, and 27.8 hours of ground instruction. Hourly rates effective **August 2021** are \$59/hour for single engine ground instruction and \$69/hour for multi-engine flight instruction and **\$237**/hour for the single aircraft and flight instructor and **\$347**/hour for the multi-engine aircraft and instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 234 – Commercial Flight III.....2.0 (2)

This course is the last of three flight courses required to obtain the FAA Commercial Pilot Certificate. This course consists of flight hours with an emphasis on commercial flight maneuvers in preparation for the Commercial Pilot FAA Practical Test. Upon completion of this course, the student will have attained the FAA Commercial Pilot Certificate. Course requires 24.6 flight hours, 3.6 hours of pre/post, and 8.0 hours of ground

instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$237**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 271 – Multi-Engine Flight.....1.0 (1)

This flight course is designed to give the student the aeronautical knowledge, proficiency, and experience required to meet the FAA Practical Test Standards for the Private or Commercial Multi-engine rating. Upon completion of this course, the student will have attained the FAA Multi-engine Land Rating. Course requires 4 flight hours, 1 hour of pre/post, and 1 ground hour. Hourly rates effective **August 2021** are \$69/hour for ground instruction and **\$347**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 272 – Multi-Engine Instructor.....2.0 (2)

In this course, the student will learn the skills to be a Certified Multi Engine Flight Instructor (MEI). They will master the skills of the Private and Commercial Pilot ratings. In addition, they will learn how to be an effective teacher and understand all FAA rules and regulations that accompany being an instructor. Course requires 5 flight hours, 1.3 hours of pre/post, and 5 hours of ground instruction. Hourly rates for effective **August 2021** are \$69/hour for ground instruction and **\$278**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 274 – Tailwheel Flight.....1.0 (1)

This course is designed to provide the student with the skills, knowledge, and experience to receive a logbook endorsement to fly tailwheel aircraft. Course requires 4 flight hours, and 1 hour of pre/post. Hourly rate effective **August 2021** is **\$219**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 275 – Seaplane Flight.....2.0 (2)

In this course, the student will gain the skills, knowledge, and experience to receive endorsement for the FAA Practical Test. Students will learn in a Piper Super Cub on floats as they demonstrate maneuvers and landings. Course requires 5 flight hours, 1.2 hours of pre/post, and 1 hour of ground instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$219**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 283– Upset Maneuver Training.....1.0 (1)

In this course, the student will learn the foundations to safely perform basic aerobatic maneuvers. Also, the student will gain confidence and skills necessary to recover from various unusual flight attitudes that will increase the students' overall flight safety. Course requires 6 flight hours, 1.5 hours of pre/post, and 2 hours of ground instruction. Hourly rates effective **August 2021** are \$59/hour for ground instruction and **\$219**/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 284 – Instrument Flight Instructor.....2.0 (2)

The student perfects both teaching and instrument flying skills while sitting in the right seat of the cockpit. The student develops the knowledge and ability to teach others instrument flying procedures. Course requires 6 flight hours, 1.2 hours of pre/post, and 8 hours of ground instruction. Hourly rates effective August 2021 are \$59/hour for ground instruction and \$237/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 382 – Flight Instructor Rating.....4.0 (4)

In this course the student will learn the skills to be a Certified Flight Instructor (CFI). They will master the skills of the Private and Commercial Pilot ratings. In addition they will learn how to be an effective teacher and understand all FAA rules and regulations that accompany being an instructor. Course requires 18 flight hours, 4.5 hours of pre/post, and 20 hours of ground instruction. Hourly rates for effective August 2021 are \$59/hour for ground instruction and \$237/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

AVF 382 – Flight Instructor Rating.....4.0 (4)

In this course the student will learn the skills to be a Certified Flight Instructor (CFI). They will master the skills of the Private and Commercial Pilot ratings. In addition they will learn how to be an effective teacher and understand all FAA rules and regulations that accompany being an instructor. Course requires 18 flight hours, 4.5 hours of pre/post, and 20 hours of ground instruction. Hourly rates for effective August 2021 are \$59/hour for ground instruction and \$237/hour for the aircraft and flight instructor. Group 2 course.

Change: Updated course description with new flight fees. (8/10/21)

Course Deletions:

CIT 233 – Project Management.....3.0 (3)

This course is intended for CIT students and business professionals who need to manage project activities or resources on time, on budget, and according to performance standards. Students use a variety of project management tools to schedule tasks, and monitor resources, cost, and project progress. **Group 2 course.**

Change: Course deleted, no longer offered effective Summer 2022.

MTH 08 – Pre-Algebra.....4.0 (4)

This course provides a review of basic arithmetic skills. It begins by reviewing traditional by-hand calculations, including multiplication and long division. Integers are introduced (signed numbers) and then all operations are combined, including exponents and grouping symbols, using the correct order of operations. The concepts of prime factorization, LCM and GCD are introduced to lead in to fraction arithmetic. Fraction arithmetic includes addition, subtraction, multiplication, and division of fractions and mixed numbers as well as combined operations using the order of operations. Basic proportions and unit prices are used to solve problems. Decimals, and their relation to fractions, with both negative and positive signs are studied. All basic operations are applied to decimals. Then percentages and ratios and proportions are studied. We finish

the course by learning about measurement systems and unit analysis, along with basic geometry including the Pythagorean Theorem. Every unit of study features applications as well as pure theory. By-hand calculations are taught and used at all levels.

Change: Course deleted, no longer offered effective Spring 2022.

MTH 23 – Beginning Algebra.....4.0 (4)

This is a basic course in algebra covering the following topics: operations on integers, rational numbers, numbers in scientific notation, and polynomials; exponent rules; dimensional analysis; solving linear equations; applications of linear equations in geometry, mixture, percents, and motion; graphing and analysis of graphs, particularly lines, in the coordinate plane; factoring; solving quadratic equations by factoring, applications of quadratic equations in geometry, mixture, percents and motion. The course concludes with an introduction to simplifying multiplying and dividing rational expressions and solving proportions. Good math writing form is stressed.

Change: Course deleted, no longer offered effective Spring 2022.