

MEDICAL ROBOTICS

GRADES 8–12

This document lists the New York learning standards addressed by Medical Robotics, True Robotics' grades 8–12 robotics curriculum. Standards are grouped by subject and grade level, with codes and wording as published by the New York State Education Department.

9

SCIENCE

7

CS

16

TOTAL STANDARDS

SCIENCE

9 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
8	MS-LS1-3	Construct an explanation supported by evidence for how the body is composed of interacting systems consisting of cells, tissues, and organs working together to maintain homeostasis.
8	MS-PS2-2	Plan and conduct an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.
8	MS-ETS1-2	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
8	MS-ETS1-4	Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
9–12	HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
9–12	HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis
9–12	HS-ETS1-1	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
9–12	HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
9–12	HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

COMPUTER SCIENCE AND DIGITAL FLUENCY

7 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
8	7-8.CT.6	Design, compare and refine algorithms for a specific task or within a program.
8	7-8.CT.7	Design or remix a program that uses a variable to maintain the current value of a key piece of information.
8	7-8.CT.8	Develop or remix a program that effectively combines one or more control structures for creative expression or to solve a problem.
8	7-8.NSD.2	Design a project that combines hardware and software components.
9–12	9-12.CT.8	Develop a program that effectively uses control structures in order to create a computer program for practical intent, personal expression, or to address a societal issue.
9–12	9-12.CT.4	Implement a program using a combination of student-defined and third-party functions to organize the computation.
9–12	9-12.IC.1	Evaluate the impact of computing technologies on equity, access, and influence in a global society.

SOURCES & NOTES

- The official science and computer science standards for New York, as published by the New York State Education Department.
- Codes and standard wording are reproduced from the official standards documents. Clarification statements, examples and assessment boundaries are omitted.
- Grade shows the grade level at which True Robotics lessons address each standard. A range (for example K-2) marks a standard written for a grade band.
- Standards text remains the property of its publisher and is reproduced here for alignment reference only.
- A lesson-level crosswalk is available on request at info@truerobotics.org.