

MEDICAL ROBOTICS

GRADES 8–12

This document lists the North Carolina 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 North Carolina Department of Public Instruction.

4

SCIENCE

7

CS

11

TOTAL STANDARDS

SCIENCE

4 STANDARDS

Based on the North Carolina state standards

GRADE	CODE	STANDARD
8	LS.7.1.4	Construct an explanation to summarize how the major systems of the human body interact with each other to support life (including digestion, respiration, reproduction, circulation, excretion, nervous).
8	PS.7.2.4	Carry out investigations to compare the efficiency of simple machines in relation to their advantages for particular purposes (to include inclined planes, pulleys, levers and wheel and axles) using qualitative data.
9–12	LS.Bio.3.1	Carry out investigations to explain how homeostasis is maintained through feedback mechanisms.
9–12	PS.PSc.5.4	Use models to explain the relationship between an object's motion and the interaction of forces acting on it according to Newton's Three Laws of Motion.

COMPUTER SCIENCE

7 STANDARDS

Based on the North Carolina state standards

GRADE	CODE	STANDARD
8	68-AP-01	Implement flowcharts and/or pseudocode to address complex problems as algorithms.
8	68-AP-02	Create clearly named variables that represent different data types.
8	68-AP-03	Design and iteratively develop programs that combine control structures including nested loops and compound conditionals.
8	68-CS-02	Design projects that combine hardware and software components to collect and exchange data.

GRADE	CODE	STANDARD
9-12	ICS-AP-01	Create prototypes that use algorithms to solve computational problems by leveraging prior student knowledge and personal interests.
9-12	ICS-AP-06	Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.
9-12	ICS-IC-01	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

SOURCES & NOTES

- The official science and computer science standards for North Carolina, as published by the North Carolina Department of Public Instruction.
- 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.