

MEDICAL ROBOTICS

GRADES 8–12

This document lists the Utah 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 Utah State Board of Education.

4

SCIENCE

7

CS

11

TOTAL STANDARDS

SCIENCE WITH ENGINEERING EDUCATION (SEED)

4 STANDARDS

Based on the Utah state standards

GRADE	CODE	STANDARD
8	7.3.3	Construct an explanation using evidence to explain how body systems have various levels of organization.
8	7.1.1	Carry out an investigation which provides evidence that a change in an object's motion is dependent on the mass of the object and the sum of the forces acting on it. Various experimental designs should be evaluated to determine how well the investigation measures an object's motion.
9–12	BIO.2.6	Ask questions to develop an argument for how the structure and function of interacting organs and organ systems, that make up multicellular organisms, contribute to homeostasis within the organism.
9–12	BIO.2.7	Plan and carry out an investigation to provide evidence of homeostasis and that feedback mechanisms maintain stability in organisms.

COMPUTER SCIENCE

7 STANDARDS

Based on the Utah state standards

GRADE	CODE	STANDARD
8	6.AP.1	Design and illustrate algorithms to efficiently solve complex problems by utilizing pseudocode and/or other descriptive methods.
8	6.AP.2	Create naming conventions for variables that support the debugging process and incorporate these variables into a simple program.
8	7.AP.1	Design and iteratively develop programs that combine control structures.

GRADE	CODE	STANDARD
8	8.AP.1	Develop a program with iterative protocols that combine control structures and use compound conditions.
8	8.CS.1	Design a project that combines hardware and software components to collect and exchange data.
9–10	9/10.AP.3	Decompose problems into multiple smaller problems through systematic analysis, using constructs (such as procedures, modules, functions, methods, and/or classes).
9–10	9/10.IC.1	Evaluate how computing has impacted and/or impacts personal, ethical, social, economic, and cultural practices.

SOURCES & NOTES

- The official science and computer science standards for Utah, as published by the Utah State Board of Education.
- 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.