Robotics Engineering Curriculum (REC)

A validated STEM program providing a pathway to industry certification!

RELEVANT AND ENGAGING CURRICULUM
CLASSROOM FRIENDLY RESOURCES
ALL-INCLUSIVE STEM SOLUTION
CERTIFICATION

intelitek
Dynamic Solutions, Inspired Classrooms
Deliver robust and relevant STEM education in a format that engages digital-native students

Robotics Engineering Curriculum (REC) provides a comprehensive study of engineering concepts including:
- Physics
- Programming
- Mechanical systems
- Electrical and electronics systems

These core concepts are delivered through relevant activities and projects using robotics as a vehicle to convey the principles of engineering. Using the award winning VEX® Robotics hardware and EasyC® robotic programming software, REC generates excitement and enthusiasm for engineering.

REC’s hybrid curriculum is aligned to STEM standards recognized nationwide, including Atlas of Science, ITEEA and NCTM. When combined with Intelitek’s LMS, you can map and report on the performance of your students, school or district to any set of standards!

Provide an immersive instructional experience with project-based learning

REC delivers instruction in a format today’s digital learners thrive in: blended learning with interactive online delivery, simulations and team-based activities.

**Project-based learning is an essential learning strategy throughout REC**

With authentic activities, scenarios and in-class competitions as capstone projects, REC creates an educational experience that is relevant to students. Working in groups with a common goal, students use their imagination and inquiry to develop individual solutions. Competitions and projects motivate students and solidify the concepts learned in the classroom. Students develop communication, teamwork and leadership skills while also learning core engineering principles.

**Flexible curriculum provides differentiated instruction for diverse learners**

Multiple instructional strategies enable students with varying knowledge, abilities and interests to become active and involved. REC immerses students in exciting scenarios to reinforce concepts and help connect the educational experience with relevant interests in the world around them.

Empower teachers to succeed

With REC, your instructor can succeed without any prior knowledge or experience as an engineering instructor. The step-by-step format provides everything needed for a successful program out-of-the-box, ready to use. REC includes full support for instructors, including detailed activity instructions, teachers guides, sample solutions and program code.

REC provides structure to enhance the effectiveness of novice instructors, with flexibility for experienced and creative instructors to build on. Whether a new teacher or an engineering pro, REC allows teachers to put the focus where it deserves to be: on student progress.
LearnMate® LMS

Intelitek’s learning management system (LMS) automates time-consuming classroom administration, freeing teachers to focus on teaching. Classes are easily set up, content is delivered consistently across multiple classes, school-wide or district-wide. Student progress is tracked in real-time with robust reporting that enables you to identify skills gaps, report on outcomes and validate your program!

- Free teachers to focus on teaching by handling time-consuming administrative tasks
- Deliver consistent content across multiple classes.
- Grade students online, view and access grades anytime, anywhere.
- Produce reports on student progress, grades and outcomes.
- Map content to any standard.
- Produce custom e-learning content.

EasyC® robotic programming software

EasyC provides the perfect robotic programming software for the classroom. No other platform provides such advanced programming capabilities while remaining easy to learn and use.

- With an intuitive drag-and-drop interface, intelligent function blocks and robust video tutorials, beginners can produce effective programs quickly while also learning concepts of C programming flow and design.
- With a full text editor, native PID functions and dynamic drive control, students can dive deep into advanced programming capabilities.

VEX® Robotics hardware

The VEX Robotics Design System offers students an exciting platform for STEM education. VEX is the most classroom-friendly platform for robotics instruction with safe components in easily managed kits, perfect for team activities.

Flexible implementation for any size program

REC is available in packages tailor-made to any program size. Whether to enhance your program, or a full-blown all-inclusive 2-year program with everything in the box down to notebooks and binders, we have a pre-packaged option that will work for you. Packages that include hardware and software are available for 10, 20 and 30-student classrooms.

- Affordable e-learning content only packages also include our robust LMS for classroom management, grade tracking and real-time feedback on student progress!

Quality components tailored for STEM Classrooms

REC is built on quality content, award-winning hardware and intuitive software, all tied together by the only learning management system developed specifically for career and technology classrooms. The result is a truly integrated solution with hardware and software fully harmonized with the content.

LearnMate® LMS

EasyC® robotic programming software

VEX® Robotics hardware

“Everything is laid out for you - your curriculum, your equipment. I don’t have to create the lesson, I don’t have to get the inventory. Just put me in the classroom and let me teach.”

Mechelle Welch, Technology Applications Instructor

Launch EasyC software directly from the content
Become a Certified Robotics Engineering Associate

Upon completion of the REC curriculum, a student will be eligible to become a Certified Robotics Engineering Associate (CREA). This credential, developed and provided by the independent National Robotics Training Center, is available in two levels, CREA I and II, corresponding to the two years of REC curriculum. Certification reflects the achievement of real career skills that are transferable to education and industry.

These measurable competencies enable students to validate their knowledge and skills, while teachers and administrators can improve outcomes, pinpoint skills gaps, enable continuous improvement and validate the success of their program!

Bring the advantages of certification to your program:

For Students:

- Improve outcomes by providing a tangible, attainable goal.
- Obtain an industry-recognized credential that validates skills.
- Gain a portable certificate to advance their careers or further academic pursuits.

For Teachers and administrators:

- Attract more students to your program.
- Establish measurable goals for students.
- Benchmark your program’s effectiveness.

Put the advantages of Robotics Engineering Curriculum to work for you:

For Students

- Relevant content connects educational experience to their interests.
- Interactive curriculum conveys instruction for digital native students.
- Blended learning, projects and competitions make learning fun.
- Multimodal strategies connect with all learning styles, enabling differentiated instruction.
- No prerequisite knowledge required, helping learners of all levels to succeed.
- Supports a range of student outcomes, from immediate employment to advanced education.
- Self-paced curriculum allows students to progress at their own pace.
- Access curriculum anywhere, anytime.
- Obtain a portable, industry-based credential to validate skills and advance career and educational goals.
- Develop essential 21st century skills like teamwork, problem solving and communication.

For Teachers

- Step-by-step curriculum provides full support for less experienced teachers.
- Comprehensive packages provide everything needed for your program.
- Self-paced curriculum enables your advanced students to progress while you focus on those needing attention.
- Employ any teaching strategy: self-directed, instructor-led, or collaborative.
- Automated classroom administration frees teachers to focus on students.
- Real-time tracking and reporting of student progress.
- Certification provides measurable results to validate your program.
- Flexible curriculum provides a framework for experienced teachers to build on and enhance, including custom content development.
- Immediate support available via email, phone or through your local distributor.
- Factory training and ongoing professional development maximize your success.

For Administrators

- Enable sustainability year-over-year, even with faculty and other changes.
- Ensure content is delivered consistently classroom-wide, department-wide, even district-wide.
- Implement a program aligned to existing STEM standards.
- Embrace changing state standards with custom standards-mapping.
- Open doors to funding and articulation by offering certification.
- Validate your program at multiple levels - student, classroom, state or district - with aggregated reports.
- Obtain a full program solution from one source, including all-inclusive curriculum, installation, support, training and professional development.
- Partner with an organization with proven after-sale support.
- No annual costs.