UTICA CENTER FOR SCIENCE AND INDUSTRY (UCSI)
Course Sequence
MECHATRONICS

9th	10th	11th	12th
UCSI DESIGN PRINCIPLES/UCSI TECHNICAL ILLUSTRATION [1 hr] [20 weeks each]	**UCSI-ELECTRONICS** [1 hr] (basic, digital, analog)	**MECHATRONICS I** [1 hr] Amatrol curriculum for Electronics, Pneumatics, Robotics	**MECHATRONICS II** [2 hrs] (math embedded) Amatrol curriculum for Programmable Logic Controllers plus senior project
UCSI-ENGLISH 9 English 9 HSCE's with Engineering, Manufacturing, Industrial Technology, (EMIT) focus	**UCSI-ENGLISH 10** English 10 HSCE's with EMIT focus	**UCSI-ENGLISH 11** English 11 HSCE's with EMIT focus	**UCSI-ENGLISH 12** English 12 HSCE's with EMIT focus
UCSI-GEOMETRY Geometry HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Possibly utilize Michigan Virtual online Algebra II for advanced math students	**UCSI-ALGEBRA I OR ALGEBRA II** Algebra I HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Include Computer Science/programming concepts as application of math theory Possibly utilize Michigan Virtual online Trig/Pre-Calc for advanced math students	**UCSI-ALGEBRA II OR TRIGONOMETRY** Algebra II HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Continue Computer Science/programming concepts as application of math theory Possibly utilize Michigan Virtual online Calculus for advanced math students	**SENIOR SEMINAR** Optional if feasible to extend to 4 or 5 hours Options for students could include: Dual enrollment/post secondary opportunities Internship/co-op Student competitions such as SkillsUSA, FIRST Robotics, or Global Trade Mission
Work-based learning opportunities such as guest speakers, field trips, distance learning	**Work-based learning opportunities such as resume writing and mock interviews, job shadowing**	**Work-based learning opportunities such as cyber mentoring and unpaid work experience**	**Work-based learning opportunities such as local/global internship**

UTICA CENTER FOR SCIENCE AND INDUSTRY (UCSI)
Course Sequence
ENGINEERING TECHNOLOGY

9th	10th	11th	12th
UCSI DESIGN PRINCIPLES/UCSI TECHNICAL ILLUSTRATION [1 hr] [20 weeks each]	**UCSI-ELECTRONICS** [1 hr] (basic, digital, analog)	**ENGINEERING TECH I** [1 hr]	**ENGINEERING TECH II** [2 hrs] (math embedded) plus senior project
UCSI-ENGLISH 9 English 9 HSCE's with Engineering, Manufacturing, Industrial Technology, (EMIT) focus	**UCSI-ENGLISH 10** English 10 HSCE's with EMIT focus	**UCSI-ENGLISH 11** English 11 HSCE's with EMIT focus	**UCSI-ENGLISH 12** English 12 HSCE's with EMIT focus
UCSI-GEOMETRY Geometry HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Possibly utilize Michigan Virtual online Algebra II for advanced math students	**UCSI-ALGEBRA I OR ALGEBRA II** Algebra I HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Include Computer Science/programming concepts as application of math theory Possibly utilize Michigan Virtual online Trig/Pre-Calc for advanced math students	**UCSI-ALGEBRA II OR TRIGONOMETRY** Algebra II HSCE's for most students taught in context of Engineering, Manufacturing, Industrial Technology (EMIT) Continue Computer Science/programming concepts as application of math theory Possibly utilize Michigan Virtual online Calculus for advanced math students	**SENIOR SEMINAR** Optional if feasible to extend to 4 or 5 hours Options for students could include: Dual enrollment/post secondary opportunities Internship/co-op Portfolio Development Student competitions such as SkillsUSA, MATE International ROV competition, FIRST Robotics, or Global Trade Mission
Work-based learning opportunities such as guest speakers, field trips, distance learning	**Work-based learning opportunities such as resume writing and mock interviews, job shadowing**	**Work-based learning opportunities such as cyber mentoring and unpaid work experience**	**Work-based learning opportunities such as local/global internship**

UTICA CENTER FOR SCIENCE AND INDUSTRY (CSI)

Course Sequence

MULTIMEDIA PRODUCTION

9th	10th	11th	12th
UCSI DESIGN PRINCIPLES/UCSI TECHNICAL ILLUSTRATION [1 hr] [20 weeks each]	**UCSI-DIGITAL ART** [1 hr]	**UCSI-MULTIMEDIA I** [2 hrs]	**UCSI-MULTIMEDIA II** [2 hrs] (math embedded) plus senior project
UCSI-ENGLISH 9 English 9 HSCE's with Arts & Communication focus	**UCSI-ENGLISH 10** English 10 HSCE's with Arts & Communication focus	**UCSI-ENGLISH 11** English 11 HSCE's with Arts & Communication focus	**UCSI-ENGLISH 12** English 12 HSCE's with Arts & Communication focus
UCSI-GEOMETRY Geometry HSCE's for most students taught in context of Arts & Communication Possibly utilize Michigan Virtual online Algebra II for advanced math students	**UCSI-ALGEBRA I OR ALGEBRA II** Algebra I HSCE's for most students taught in context of Arts & Communication Possibly utilize Michigan Virtual online Trig/Pre-Calc for advanced math students	**UCSI-ALGEBRA II OR TRIGONOMETRY** Algebra II HSCE's for most students taught in context of Arts & Communication Possibly utilize Michigan Virtual online Calculus for advanced math students	**SENIOR SEMINAR** Optional if feasible to extend to 4 or 5 hours <u>Options for students could include</u>: Dual enrollment/post secondary opportunities Internship/co-op Portfolio Development Student competitions such as SkillsUSA, FIRST Robotics, or Global Trade Mission
Work-based learning opportunities such as guest speakers, field trips, distance learning	**Work-based learning opportunities such as resume writing and mock interviews, job shadowing**	**Work-based learning opportunities such as cyber mentoring and unpaid work experience**	**Work-based learning opportunities such as local/global internship**