

Robotics

Semester Course Outline • 2018 – 2019



18 Months (4 Semesters) • Revised: 2/28/18

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 72



First Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EST 103	DC Electronics	112	4
EST 109	AC Electronics	112	4
EST 267	Rework, Repair, and Surface Mount Soldering	56	2
RBTC 200	Mechanical Design and 3-D Modeling A	56	2
RBTC 203	Mechanical Design and 3-D Modeling B	28	1
RBTC 210	Mechanical Systems A	28	1
RBTC 212	Mechanical Systems B	28	1
<ul style="list-style-type: none"> Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 102 – College Algebra * 		45	3
Total		465	18

First Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
EST 115	Electronic Systems	168	6
EST 121	Digital Systems A	112	4
EST 123	Digital Systems B	56	2
ET 175	Basic Motor Controls	84	3
CIS 102	Windows Applications for Technicians	45	3
Total		465	18

Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EST 219	Computer Control Systems	56	2
EST 247	Microcontrollers	84	3
RBTC 205	Programmable Logic Controllers	84	3
RBTC 207	Fluid Power	56	2
RBTC 227	Robot Operation and Programming	56	2
<ul style="list-style-type: none"> Selected Communications Course (Choose one) COMM 101 – Communications and Career Strategies ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit) SPCM 101 – Fundamentals of Speech * (CSS 100 – Career Search Strategies .5 credit) 		45	3
<ul style="list-style-type: none"> Selected Social Science Course (Choose one) ECON 105 – Leadership in the Global Workplace ECON 201 – Principles of Microeconomics I * 		45	3
Total		426	18

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Second Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
RBTC 202	Robotic Engineering	168	6
RBTC 219	PLC Integration	84	3
PM 228	Introduction to Precision Machining	112	4
WLD 232	Welding Process	56	2
<ul style="list-style-type: none"> Selected Behavioral Science Course (Choose one) PSYC 100 – Psychology of Human Relations PSYC 101 – General Psychology * 		45	3
Total		465	18

Elective Courses: Students can take any Electronics course as an elective that is not listed on the current semester outline. Anatomy 142, Chemistry 106/106L, and Chemistry 108/108L can also be taken as elective courses.

With the instructor’s approval, SCT 100 – Solar Car Team may be substituted for up to 6 credits of course work or taken as an additional elective.

- Students will select a course in each of the areas listed to meet general education requirements. Courses marked with an asterisk (*) can be transferred directly to the university system and may be substituted for recommended courses on the outline. Students should speak with an advisor before doing so.

Students who select to take transferable communications course ENGL 101 or SPCM 101, must also register for CSS 100 – Career Search Strategies for .5 credit. This curriculum is required for all Lake Area Tech graduates and is included in the COMM 101 course but is separate from the university system.