Robotics • January Start
Semester Course Outline • 2021 – 2022
23 Months (5 Semesters) • Revised: 2/24/21
Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 72

LAKE AREA TECH COLLEGE

First Spring Semester (January – May)

Course Number	Course Title	Clock Hours	Credits
EST 219	3D Printer Build	84	3
RBTC 207	Fluid Power	56	2
• Selected Behavioral Science Course (Choose one) PSYC 100 – Psychology of Human Relations PSYC 101 – General Psychology*		45	3
• Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 114 – College Algebra *		45	3
• Selected Social Science Course (Choose one) ECON 105 – Leadership in the Global Workplace ECON 201 – Principles of Economics I (Micro) * ECON 202 – Principles of Economics II (Macro) * SOC 100 – Introduction to Sociology *		45	3
	Total	275	14

First Fall Semester (August – December)

Course Number	Course Title	Clock Hours	Credits
EST 116	DC/AC Electronics	112	4
EST 121	Digital Systems A	84	3
EST 123	Digital Systems B	28	1
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
	Total	420	15

Second Spring Semester (January – May)

Course Number	Course Title	Clock Hours	Credits
EST 115	Electronic Systems	112	4
RBTC 175	Basic Motor Controls	84	3
RBTC 205	Programmable Logic Controllers	84	3
CSC 102	Windows Applications for Technicians	45	3
	Total	325	13

Second Fall Semester (August – December)

Course Number	Course Title	Clock Hours	Credits
EST 246	Circuit Board Design	84	3
EST 247	Microcontrollers	84	3
RBTC 219	PLC Integration	84	3
RBTC 227	Robot Operation and Programming	84	3
● 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
	Total	381	15

Third Spring Semester (January – May)

Course Number	Course Title	Clock Hours	Credits
RBTC 202	Robotic Engineering	168	6
RBTC 238	Advanced Robot Operation	84	3
PM 228	Introduction to Precision Machining	112	4
WLD 232	Welding Process	56	2
	Total	420	15

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.