



# Heavy Equipment Operator

## Semester Course Outline • 2026 – 2027

22 Months (4 Semesters, 2 Summer Sessions) • Revised: 2/26/26

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 72.5

\* Optional Exit Point for Diploma • 11 Months (2 Semesters, 1 Summer Session)

Credits Required for Graduation: 41

### First Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
HEO 100	Heavy Equipment Operations I Theory	15	1
HEO 102	Heavy Equipment Operations I Lab	90	2
HEO 105	Equipment Simulators	56	2
HEO 115	Heavy Equipment Operator Safety	28	1
HEO 120	Site Modification	56	2
CDL 100	Written Preparation	15	1
CDL 102	Behind the Wheel Training	84	3
<ul style="list-style-type: none"> <li>Selected Communications Course (Choose one)            CMST 101 – Foundations of Communication * (CSS 100 – Career Search Strategies .5 credit)            COMM 101 – Communications and Career Strategies            ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit)</li> </ul>		45	3
<ul style="list-style-type: none"> <li>Selected Mathematics Course (Choose one)            MATH 100 – Applied General Math            MATH 101 – Intermediate Algebra            MATH 114 – College Algebra *</li> </ul>		45	3
<b>Total</b>		434	18

### First Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
HEO 110	Site Engineering and Layout Theory	30	2
HEO 130	MSHA Certification	28	1
HEO 140	Backhoe and Front End Loader	56	2
HEO 145	Earthmoving Blueprints and Grade Stakes Theory	30	2
HEO 150	Equipment Preventive Maintenance	56	2
HEO 163	Heavy Equipment Operations II	56	2
HEO 170	Crane Certification	56	2
FLT 132	Advanced Unmanned Aerial Systems	84	3
WLD 130	Intro to Stick Metal Arc Welding	28	1
<b>Total</b>		424	17

### First Year – Summer Session

Course Number	Course Title	Clock Hours	Credits
HEO 201	Heavy Equipment Operations III	140	5
HEO 202	Advanced Equipment Preventive Maintenance	28	1
<b>Total</b>		168	6

\* **Exit point for Diploma Option:** An exit point is intended for those students who do not pursue the Associate of Applied Science (A.A.S.) Degree. These students will receive a diploma.



### Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
HEO 203	Base and Rover for Construction	84	3
HEO 205	Grader Operations	84	3
HEO 215	GPS for Field Machines	56	2
HEO 225	Soils and Compaction	42	1.5
HEO 233	Heavy Equipment Operations IV	84	3
● Selected Behavioral Science Course (Choose one) PSYC 100 – Psychology of Human Relations PSYC 101 – General Psychology *		45	3
<b>Total</b>		395	15.5

### Second Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
HEO 210	Demolition and Estimating Theory	15	1
HEO 230	Budgeting for Seasonal Worker	15	1
HEO 237	Hydraulic Systems	28	1
HEO 242	Project Management	30	2
HEO 250	Internship	240	4
HEO 255	Electrical Systems	28	1
CSC 102	Window Applications for Technicians	45	3
● Selected Social Science Course (Choose one) ECON 105 – Leadership in the Global Workplace ECON 201 – Principles of Microeconomics * SOC 100 – Introduction to Sociology *		45	3
<b>Total</b>		446	16

- 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 CMST 101 or ENGL 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.