

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

**COURSE NUMBER – COURSE NAME
AUTO 253 – SUBARU UNIVERSITY TRAINING**

Created by: Brandon Baldwin

Updated by: Brandon Baldwin

Canino School of Engineering Technology

Department: AUTOMOTIVE TECHNOLOGY

Semester/Year: SPRING 2020

A. **TITLE:** Subaru University Training

B. **COURSE NUMBER:** AUTO 253

C. **CREDIT HOURS:** 1 credit hour(s) per week for 15 weeks

- One hour (50 minutes) of lecture per week
 Two to three hours of lab or clinical per week
 Two hours of recitation per week
 40 hours of internship

D. **WRITING INTENSIVE COURSE:** Yes No

E. **GER CATEGORY:** None: Yes: GER
If course satisfies more than one: GER

F. **SEMESTER(S) OFFERED:** Fall Spring Fall & Spring

G. **COURSE DESCRIPTION:**

Students who earned their way into Subaru-U by earning a grade of B or higher GPA and have an interest in employment at a Subaru dealership upon graduation, take on-line courses from Subaru to begin with. Subaru-U training Level 1 is non-manufacturer specific and reinforces SUNY Canton Automotive training at the 100 level. Subaru-U training Level 2 is specific to Subaru yet still reinforces SUNY Canton Automotive training at the 200 level. Level 1 and 2 are the prerequisites to Level 3 face-to-face training at Subaru training centers.

H. **PRE-REQUISITES:** None Yes If yes, list below:

AUTO 101, 111, 112, 122

CO-REQUISITES: None Yes If yes, list below:

I. STUDENT LEARNING OUTCOMES: (see key below)

By the end of this course, the student will be able to:

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>Program Student Learning Outcome</u> <u>[PSLO]</u>	<u>GER</u> <i>[If Applicable]</i>	<u>ISLO & SUBSETS</u>	
Apply scan tool and electrical knowledge to diagnose body, engine, and transmission electronic system circuits	ALO1, ALO3		2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO	CA IA PS Subsets
Apply electronics knowledge to check for module communication errors, program modules, and hybrid functions.	ALO1, ALO3		2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO	CA IA PS Subsets
Distinguish between frequency levels to determine source of noise, vibration, or harshness.	ALO1, ALO3		2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO	CA IA PS Subsets
Interpret scan tool data to reduce electrical, and electronic diagnosis time.	ALO1, ALO2		2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO	CA IA PS Subsets
Interpret oscilloscope wave forms to interpret electrical, electronic, and module communication networks.	ALO1, ALO3		2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO	CA IA PS Subsets
			ISLO ISLO ISLO	Subsets Subsets Subsets Subsets

			ISLO ISLO ISLO	Subsets Subsets Subsets Subsets
			ISLO ISLO ISLO	Subsets Subsets Subsets Subsets
			ISLO ISLO ISLO	Subsets Subsets Subsets Subsets
			ISLO ISLO ISLO	Subsets Subsets Subsets Subsets

J. **APPLIED LEARNING COMPONENT:** Yes No

If YES, select one or more of the following categories:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Classroom/Lab | <input type="checkbox"/> Civic Engagement |
| <input type="checkbox"/> Internship | <input type="checkbox"/> Creative Works/Senior Project |
| <input type="checkbox"/> Clinical Placement | <input type="checkbox"/> Research |
| <input type="checkbox"/> Practicum | <input type="checkbox"/> Entrepreneurship |
| <input type="checkbox"/> Service Learning | (program, class, project) |
| <input type="checkbox"/> Community Service | |

K. **TEXTS:**

none

L. **REFERENCES:**

Subaru-U.com

M. **EQUIPMENT:** None Needed: technology enhanced classroom, or laptops in the automotive lab

N. **GRADING METHOD:** A-F

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**

- Exams given at the end of each unit by Subaru
- Participation

P. **DETAILED COURSE OUTLINE:**

- I. Level 1 Training
 - A. Introduction to SSM3 (Subaru Service Monitor 3)
 - B. Subaru Technical Information System
 - C. Repair Order Write-Up
 - D. Basic Electrical I & II
 - E. Bluetooth & BlueConnect
 - F. Remote Engine Start
 - G. Generic Hybrid Overview
 - H. NVH (Noise, Vibration, & Harshness Overview)
- II. Level II Training
 - A. Automatic Transmission Learning Procedure
 - B. Basic Fuel Injection Part 1
 - C. Basic Fuel Injection Part 2
 - D. Diagnosis & Documentation of the DTC P0420
 - E. DST-I Oscilloscope
 - F. Electronic Throttle Control: Overview
 - G. Engine Service Tips

KEY	<u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA], Inquiry & Analysis [IA], Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

*Include program objectives if applicable. Please consult with Program Coordinator

- H. EyeSight Overview
- I. GR8 Battery Diagnostic Station
- J. Occupant Detection System (ODS)
- K. Troubleshooting using Inputs and Outputs of Control Modules

Q. LABORATORY OUTLINE: None Yes