Grade 10

CSEC Industrial Technology – Unit Delivery Plan

Mechanical Engineering Technology Option
5 Hours per Week | 36 Weeks | ~180 Total Contact Hours

Term 1 (Weeks 1–12)

Weeks	Module	Hours	Main Activities / Focus
1–3	B1: Safety, Health & Welfare	15	Workshop rules, PPE, first aid, fire safety, safety posters, drills
4–6	B3: Bench Work & Hand Tools	15	Tool ID, cutting, filing, tapping, small fabrication project
7–9	B4: Layout, Measurement & Testing	15	Use of calipers, micrometers, measurement exercises, tolerances
10–12	B5: Sheet Metal Fabrication	15	Pattern development, cutting, folding, seam types, tray project

Term 2 (Weeks 13–24)

Weeks	Module	Hours	Main Activities / Focus

13–16	B2: Machine Tools	20	Lathe, milling, drilling, grinding demos, student practice
17–19	B6: Machine Devices	15	Shafts, keys, bearings, gears; assembly tasks
20–22	B9: Metallurgy	15	Properties of metals, hardness testing, practical reports
23–24	B7: Preventative Maintenance	10	Lubrication, schedules, logbook prep

Term 3 (Weeks 25–36)

Weeks	Module	Hours	Main Activities / Focus
25–28	B8: Engineering Design	20	Orthographic projection, dimensioning, drawing tasks, CAD intro
29–31	B10: Introduction to Computers	15	Document creation, basic CAD, research
32–33	B11: Career Opportunities	10	Guest speakers, career research, presentations

34–36	SBA Completion & Exam Review	15	Finalize projects, review past papers, organize SBA portfolio

Module Hours Summary

Module	Total Hours
B1: Safety, Health & Welfare	15
B3: Bench Work & Hand Tools	15
B4: Layout, Measurement & Testing	15
B5: Sheet Metal Fabrication	15
B2: Machine Tools	20
B6: Machine Devices	15

B9: Metallurgy	15
B7: Preventative Maintenance	10
B8: Engineering Design	20
B10: Introduction to Computers	15
B11: Career Opportunities	10
SBA Completion & Exam Review	15
Total	**180**

Weekly Teaching Rhythm (Example)

- 2 hours – Theory and demonstrations
- 3 hours – Practical activities, SBA development

SBA Suggestions

- Fabrication of a sheet metal product

- Machining projects (lathe/milling)
- Engineering drawing portfolio
- Preventative maintenance schedule
- Metallurgical testing reports

Teaching Strategies

- Active demonstrations and hands-on practice
- Videos, diagrams, guest speakers
- Regular SBA tracking

Resources Needed

- Workshop tools and machines
- Sheet metal and measuring tools
- Computers (optional CAD)
- Engineering drawing tools