2 COURSE 2 · STUDENT HANDOUT

Builder Orientation

From user to builder. One live build, one student build, one paper decomposition drill — in two hours.

DURATION 2 hr (1 break)
AUDIENCE Aspiring builders
PREREQ Course 1

0:00–0:15	0:15–0:40	0:40–0:50	0:50–1:30	1:30–1:50	1:50–2:00
M1 Builder Mindset	**M2 Live Build #1**	**Break**	**M3 Student Build + Recovery**	**M4 Decomposition Drill**	**M5 Wrap & Assignment**
15 MIN · TALK	25 MIN · DEMO	10 MIN	40 MIN · BUILD	20 MIN · PAPER	10 MIN

BRING WITH YOU

Done before you walk in

- **Course 1 complete.** Centaur, cyborg, the six 201 skills, and the delegation equation should be familiar — we build on them.
- **A laptop with M365.** Power Apps, SharePoint, and one AI tool (GenAI.mil preferred) signed in *before* you arrive.
- **One real section problem in your head.** Something annoying that recurs at least weekly — the candidate for your prototype.
- **A notepad.** Module 4 is paper decomposition. No laptop touches paper-only exercises.
- **Your frontier sticky from Week 1.** We will reference it in Module 1 and add to it in Module 5.

KEY TERMS

The vocabulary you'll hear today

- **Decomposition**
  Breaking a problem into the smallest useful pieces *before* you open AI. The single biggest predictor of build quality.
- **Prototype**
  A working core function — even if rough. Not pretty, not complete, *working*.
- **The four decomposition questions**
  What data fields? What does the user need to do? What is the simplest useful version? What data structure backs it?
- **The simplest useful version**
  The one core function the tool must do. Build that first; everything else is iteration.
- **Peer review (the four checks)**
  Clear problem statement · core function works · evidence of iteration · can explain the choices.
- **Failure case**
  A specific thing AI got wrong on your build — the most valuable thing you can share with other builders.

EXERCISES IN CLASS

What you will do live — and what "done" looks like

M2 · Decompose first, on the whiteboard (5 min, group). Equipment Tracker. Before any AI: name the data fields, the user actions, the simplest useful version, and the data structure that backs it. *Done:* the room can call out item name, serial, assigned-to, dates, status, and the four user actions before the instructor opens a tool.

M3 · Pick a starter problem and build it (25 min). Choose one: Leave request tracker · Training attendance log · Vehicle inspection checklist · *your own* section problem (clear scope with the instructor first). Decompose on paper for 2 min, then prompt. *Done:* the core function works, even if rough.

M3 · Peer review (15 min). Pair up. Six minutes each: demo → partner walks the four checks. Clear problem statement · core function works · evidence of iteration · you can explain *why* you made each choice. *Done:* you can answer Check 04 without saying "the AI told me to."

M4 · Decompose a real unit problem (10 min individual). Pick a recurring problem from *your* section. Run the four questions on paper. No AI. *Done:* a specific simplest-useful-version you could prototype this week.

M4 · Pair review the decompositions (8 min). Trade worksheets. Your partner pressure-tests your scope: too big? too vague? data structure missing? *Done:* you walk out with one decomposition you trust enough to start building tonight.

> **ANCHOR PHRASE** Five minutes on paper saves thirty minutes building the wrong thing.

WHAT YOU'LL BE ABLE TO DO

By the end of the session

- Decompose a real section problem on paper before opening any tool.
- Build a working prototype of a single core function in 25 minutes.
- Run a peer review on someone else's build using the four checks.
- Defend *why* you made each design choice — not just *what* AI suggested.
- Spot when a build is "too big" and cut it back to the simplest useful version.

HOMEWORK

Come to Course 3 with four things · 2–4 hours over the week

- **One.** A working (or partially working) prototype of the problem you decomposed in Module 4.
- **Two.** Notes on what worked — prompts that landed, features that came together fast.
- **Three.** Notes on what didn't — errors you hit, features you cut, dead ends.
- **Four.** One **failure case** worth sharing — something AI got wrong that other builders should know about.
- **Support:** office hours (Wed 1500–1600), *#builder-orientation* Teams channel, *ai-builders@1stbn99thmar.mil*. Use them; don't struggle silently.