

Protoforge — Concept Poster

Print this and pin it up — an at-a-glance map of the Protoforge cast and the ideas each one carries. Come back to it whenever you want to remember who teaches what.

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Meet the cast — and what each one teaches

Character	What they carry
Cade	Constraint definition — states the criteria and constraints before designing
Rhea	Requirements / spec — turns a fuzzy need into a measurable spec (Rhea + Cade = define-the-problem case)
Tori	Trade-off / optimization — balances cost vs strength vs weight to the best point
Bex	Prototyping / test-to-failure — builds a prototype and tests it to failure
Dagny	Failure analysis — reads WHY it broke, not just that it broke
Iggy	Iteration / redesign — rebuilds after every failed test
Mala	Materials & tolerances — picks the material that meets the spec within tolerance
Sy	Systems & interfaces — makes the parts fit and work together
Dov	Cost & budget — keeps the design within budget
Enzo	Mentor — frames the challenge and guides reflect-on-design (the AAR guide)

Key ideas at a glance

The big concepts this cast helps you master:

- the design process
- criteria & constraints
- measurable specifications
- brainstorm & choose among concepts
- balance competing criteria
- model before you build
- test + collect data

- why it broke
 - improve + retest
 - pick materials to spec
 - structures: stress & load paths
 - systems: energy + efficiency
 - design within budget
 - parts must fit + work together
 - users + environment
 - design + defend under constraints
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