Problem statement: AI-Driven Study Schedule Generator

Objective:

**AI-Driven Study Schedule Generator**

Nice — here’s a ready-to-use, practical AI-driven study-schedule system you can apply immediately. I’ll give you: (A) how it works, (B) the algorithm/logic, (C) templates you can copy (one-week cram, 12-week semester, daily 4-hour routine), (D) CSV template to export, and (E) how to get a personalized schedule (what to paste). No waiting — everything here to use right now.

**A. How it works (quick)**

1. Input your goal, deadline, subjects/topics, current mastery per topic, available hours per day, and preferred study style (Pomodoro, long-blocks, mixed).
2. System breaks the goal into topics, estimates required study time per topic (based on mastery vs difficulty), schedules distributed practice with increasing intervals (spaced repetition), and balances active recall + interleaving + rest.
3. Output: daily plan with study blocks, specific tasks (read/flashcards/practice problems/review), and weekly review slots.

**B. Core algorithm (simple, human-readable)**

1. **Normalize inputs** — total days D, total available hours per day H, topics T with weights (importance × difficulty × (1 − mastery)).
2. **Compute required minutes per topic**: allocate proportional to weight; ensure minimum chunk size (25–45 min).
3. **Schedule blocks**:
   * Use Pomodoro by default (25/5) or 50/10 if you prefer longer focus.
   * Place highest-priority topics in your best-focus time (morning if you’re a morning person).
   * Insert short review blocks every 1–3 days for spaced repetition (1 day, 3 days, 7 days, 14 days pattern).
4. **Active practice ratio**: 60% practice (problems/recall), 30% review/notes, 10% new reading.
5. **Weekly check**: every 7 days — test + reassign time based on performance.
6. **Fatigue guardrails**: max 6 hours focused study/day recommended (unless cramming), enforce at least one full rest day per 7 days.

**C. Ready-to-copy templates**

**1) One-week cram plan — target: exam in 7 days, 6 hours/day**

Assumptions: 4 subjects, each has 3 topics. Use Pomodoro 50/10.

Day structure (6 hours = 6 × 50-min blocks with 10-min breaks):

* Block 1 (50m): Subject A — Topic 1 (active problems)
* Break 10m
* Block 2: Subject A — Topic 2 (practice + flashcards)
* Break
* Block 3: Subject B — Topic 1 (timed questions)
* Lunch / 60m rest
* Block 4: Subject C — Topic 1 (concept map + problems)
* Break
* Block 5: Subject D — Topic 1 (past questions)
* Break
* Block 6: Mixed review (30m each for lowest scored two topics from self-test)

Repeat per day rotating topics; incorporate a 60–90 minute mock exam on Day 4 and Day 7 morning.

**2) 12-week semester plan — target: consistent learning, 12 weeks, 10 hours/week**

High-level weekly template:

* Monday — New content deep-dive (2h)
* Tuesday — Practice problems (1.5h)
* Wednesday — Light review + flashcards (1h)
* Thursday — Lab/homework / problem set (2h)
* Friday — Interleaved practice (1.5h)
* Saturday — Weekly test + weak-topic reinforcement (1.5h)
* Sunday — Rest or light reading (optional 0.5h)

Milestones:

* Weeks 1–4: build foundations (40% of curriculum)
* Weeks 5–8: apply & practice (40%)
* Weeks 9–11: revision + past papers (15%)
* Week 12: final consolidation + final mocks (5%)

Add spaced-repetition schedule in week planner: review day 1, day 4, day 10 for each concept.

**3) Daily 4-hour routine — for steady progress**

Assume Pomodoro 25/5:

* 09:00–09:25 Study Block 1 — Hard topic (active problem)
* 09:30–09:55 Block 2 — Continue / flashcards
* 10:00–10:25 Block 3 — Mixed practice
* 10:30–11:00 Break + review notes (long break)
* 11:00–11:25 Block 4 — Secondary topic (reading + notes)
* 11:30–11:55 Block 5 — Practice + summarise
* 12:00–12:30 Wrap-up: 5-minute recall of 3 points, schedule tomorrow's priorities

Tips: do hardest topic first, end with a 10–15 minute retrieval practice session.

**D. CSV export template (import into Google Calendar or spreadsheet)**

Columns: Subject, Task, Date, Start Time, End Time, Location/Notes

Example rows (CSV lines):

Subject,Task,Date,Start Time,End Time,Notes

Math,Chapter 5 — Solve problem set,2025-10-16,09:00,10:00,Pomodoro blocks 50/10

Physics,Flashcards — Mechanics,2025-10-16,11:00,11:30,Review spaced rep (day 1)

Chemistry,Mock test (timed),2025-10-18,14:00,16:00,Simulate exam conditions

Biology,Diagram practice — cell,2025-10-17,09:00,09:50,Active recall

Save as .csv and import into Google Calendar (choose “Import” → map columns). Adjust times to your timezone.

**E. How I can personalize it for you (paste any of the following and I’ll produce a finished schedule instantly)**

Paste a single message with these items (no need for follow-up questions):

* Goal (exam/course/project) + target date (YYYY-MM-DD)
* Subjects/topics list with difficulty or % mastered (e.g., Math: Algebra 40% mastered; Calculus 20%)
* Available days/hours per day (e.g., Mon–Fri 2 hrs, Sat 5 hrs)
* Preferred focus pattern (Pomodoro 25/5, long-block 50/10, or mixed)
* Any hard constraints (work hours, sleep, family time)

If you paste that, I’ll generate: day-by-day schedule (calendar-ready), suggested flashcard schedule, weekly tests, and CSV export-ready lines.

**Quick practical tips (one-liners)**

* Do a 10-minute retrieval test at the end of each study session.
* Use active recall & practice problems — not passive re-reading.
* Sleep 7+ hours: consolidation happens during sleep.
* Reduce context-switching: group similar tasks (interleaving is for practice, not deep-focus reading).