

# **AoK AI-Tutoring Framework**

## **Student Desktop App Manual**

*Your Personal AI-Powered Learning Journey*

Version 4.0 | June 2026

Developed by Professor Mohammad Tawfik

# 1. Introduction

Welcome to the AoK AI-Tutoring desktop app — your personal AI-powered learning environment designed to help you study engineering courses effectively.

What makes this system special: your AI Tutor has read and understood all the lecture notes and materials in your course. It gives answers based on your actual course content, not generic information from the internet.

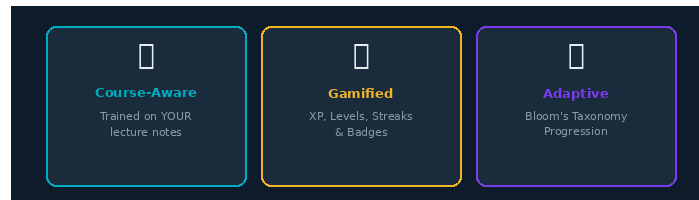


Figure 1: Three things that make this tutor unique

**New in Version 4:** your tutor is now a true learning *agent*. There are no more separate Tutoring and Assessment modes — the tutor teaches, checks your understanding, and scores your answers inside one natural conversation, which you steer in plain language. It can also work across whole topics and modules, link you straight into related lessons, suggest other courses you can access, and greet you with an honest summary of your own progress.

💡 The gamification engine tracks XP, levels, streaks, and badges globally across all your courses. The more you engage, the faster you climb to Chief Engineer!

This manual covers every feature of the student workspace with step-by-step instructions, from first registration to mastering checks and earning advanced badges.

## 2. Getting Started: Login & Registration

Launch the application from its installed shortcut. The Access Portal uses a dark "Scholarly Night" theme — deep navy with gold accents.

### 2.1 The Login Portal

The portal has two selectors at the top: a Role Toggle and a Mode Tab Switcher.

- **Role Toggle** — choose Student or Professor before signing in.
- **Mode Tabs** — switch between Sign In and Create Account.

Always make sure **Student** is selected in the role toggle before proceeding.

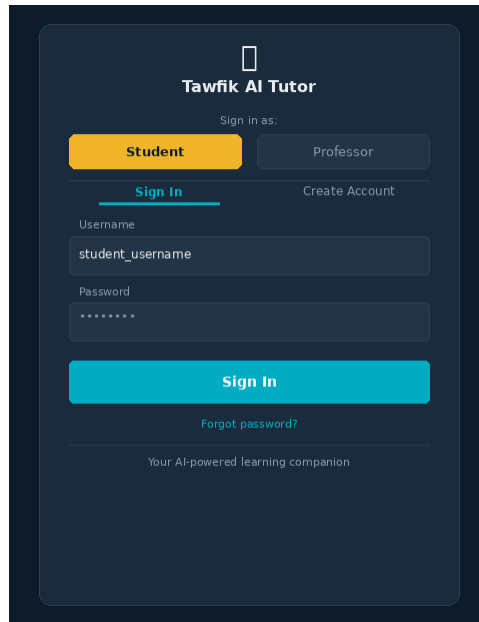



Figure 2: The login portal — Student role selected (gold highlight)

## 2.2 First-Time Registration

 Student registration requires email verification. Have your email address ready before you begin.

1. Click the **Create Account** tab.
2. Enter a unique username.
3. Enter a password.
4. Enter your email address.
5. Click **Send Verification Code**.

Tawfik AI Tutor

Student Professor

Sign In Create Account

Username  
new\_student

Password  
\*\*\*\*\*

Email Address  
student@university.edu

Send Verification Code

A verification code will be sent to your email address

Figure 3: Create Account form with email field

The system sends a 6-digit code to your email address. The Verification Screen appears automatically.

1. Open your email and find the message from AoK AI.
2. Type the 6-digit code into the large input box.
3. Click **Verify & Create Account**.

Check Your Email

We've sent a 6-digit code to [student@university.edu](mailto:student@university.edu)

8 4 7 2 9 3

Enter the 6-digit code above

Verify & Create Account

Code is valid until you close this screen  
Didn't receive it? Check your spam folder.

Figure 4: Email verification screen — enter your 6-digit code



The code is valid until you close the signup screen. If you close it, start registration again.

## 2.3 Signing In

1. Make sure the **Student** role button is selected (highlighted in gold).

2. Confirm the **Sign In** tab is active.
3. Enter your username and password.
4. Click **Sign In**. The Welcome screen appears.

If you registered on another device, the system checks the cloud automatically and caches your account locally.

## 2.4 The Welcome Screen

After signing in you see a personalised Welcome screen showing your username initial as an avatar.

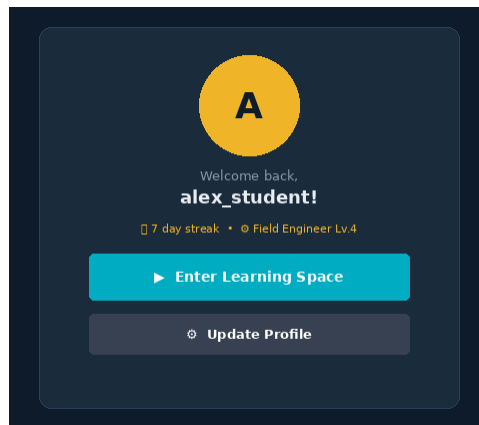


Figure 5: Welcome screen after login

- **Enter Learning Space** — opens the Student Workspace.
- **Update Profile** — opens the profile editor to set your root path.

## 2.5 Setting Your Root Path (Required on First Login)

**!** You must set your Root Path before you can access courses. Without it, the workspace cannot load your local course library.

1. Click **Update Profile**.
2. Fill in your full name and email (optional but recommended).
3. Click **Browse** and select a folder on your computer where courses will be stored.
4. Click **Save & Return**.
5. Click **Enter Learning Space** to proceed.

### Update Profile

Full Name

Email Address

Root Path (courses folder)

Set once — remembered on every login

Figure 6: Profile screen — set your workspace root path

💡 Your Root Path only needs to be set once. After that, just Sign In and click Enter Learning Space.

## 3. The Student Workspace

The Student Workspace is the main learning environment. It has three panels that you can show or hide independently.

**AoK AI-Tutor**
Fluid Mechanics 101
My Courses
Cloud Repo
Lv.4
Streak 7
My Progress
Panels: Tree | Dash | AI

KNOWLEDGE TREE

Fluid Mechanics 101

- ▼ Module 1: Properties
- ▼ Topic 1.1: Viscosity
  - Intro to Viscosity
  - Newton's Law
- ▶ Topic 1.2: Density
- ▶ Module 2: Flows

LEARNING DASHBOARD

**Intro to Viscosity**

★ ★ ★

Completed

Open

**Newton's Law**

★ ★ ☆

Completed

Open

**Kinematic Viscosity**

★ ☆ ☆

In progress

Open

**Temperature FX**

☆ ☆ ☆

Not started

Open

Study Timer

▶ Start

25:00

AI TUTOR

Newton's Law of Viscosity

What is Newton's law of viscosity?

**AI Tutor**

Newton's law states shear stress ∝ velocity gradient:

$\tau = \mu \cdot (du/dy)$

Open this lesson: Intro to Viscosity

Finish & Save Report

View Saved Report

Ask the Tutor...

Send Prompt

Figure 7: The three-panel Student Workspace — Knowledge Tree (left), Learning Dashboard (centre), AI Tutor (right)

### 3.1 Knowledge Tree (Left)

Displays the hierarchical course structure: modules contain topics, and topics contain lessons.

- Click a **lesson** to open its content in the Learning Dashboard.
- Click a **topic, module, or the course itself** to study at that wider level — the AI Tutor will then answer questions across everything inside it (see Chapter 7).
- Collapse or expand branches using the arrow icons.

### 3.2 Learning Dashboard (Centre)

Your main study area — lesson cards with star ratings, breadcrumb navigation, an embedded media player for videos and PDFs, and the Study Timer.

### 3.3 AI Tutor Panel (Right)

Your personal AI teaching assistant — the conversation area, the Quick Actions bar, the report buttons, and the prompt box with Text-to-Speech controls. Chapter 5 covers it in detail.

### 3.4 XP Progress Bar & Gamification HUD

A live XP progress bar and streak counter appear in the top-right of the toolbar at all times. The bar shows your progress toward the next engineer level.



Figure 8: The Gamification HUD — level, XP bar, streak, and badges

### 3.5 Showing and Hiding Panels

Three toggle buttons in the toolbar — **Knowledge Tree**, **Learning Dashboard**, and **AI Tutor** — show or hide each panel independently. A pressed (coloured) button means the panel is visible; click it again to hide the panel and give the others more room.

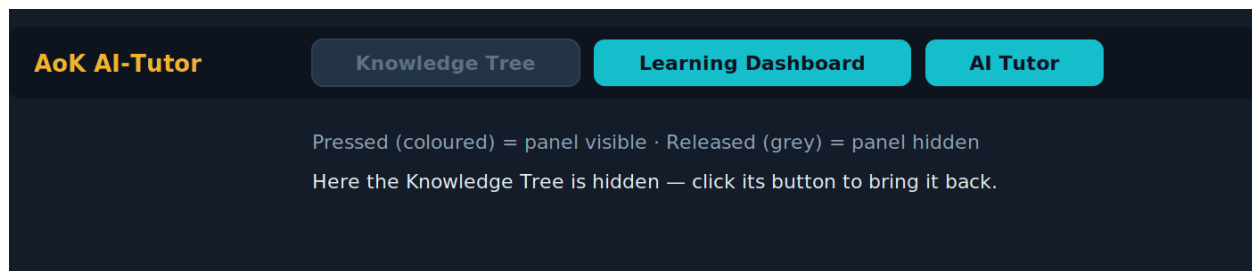



Figure 9: The panel toggle buttons — pressed means visible




Hiding panels is useful for focusing on a single panel on a smaller screen.

## 4. Browsing & Opening Courses

### 4.1 My Courses (Local Library)

1. Click  **My Courses** (purple button) in the toolbar.
2. Course cards appear in the Learning Dashboard.
3. Click any card to open the course and load its Knowledge Tree.

### 4.2 Cloud Repository

1. Click  **Cloud Repo** (white button) in the toolbar.
2. Browse published courses from your professor.
3. Click any course card to download it to your local library.

Courses synchronise with the cloud when you open them, so you always receive the latest content published by your professor.

## 5. Your AI Tutor

The AI Tutor is your most powerful learning tool. Unlike generic chatbots, this tutor has read all your lecture notes and understands the full curriculum of your course. It explains, gives examples, asks you questions when the moment is right, scores your answers, and remembers your journey — all inside one natural conversation.

### 5.1 One Conversation — Teaching and Checking

There are no modes to switch and no tabs to press. You simply talk to your tutor:

1. Select a lesson (or a wider scope — Chapter 7) from the Knowledge Tree.
2. Check that the CONTEXT label in the AI Tutor panel shows the right name.
3. Type your question in the prompt box and press Enter or click **Send Prompt**.

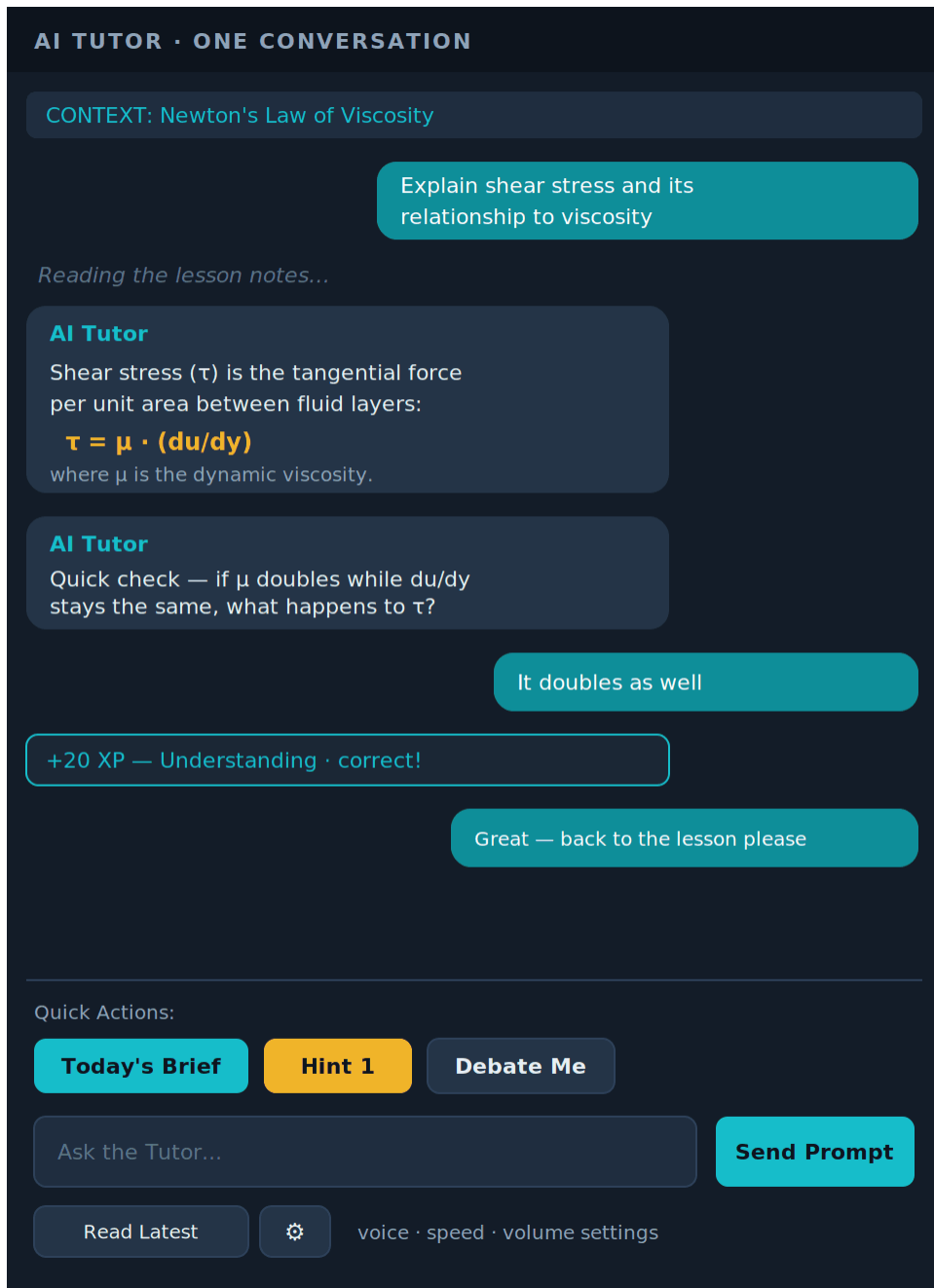



Figure 10: One conversation — the tutor explains, slips in a quick check, scores your answer, and continues where you steer it

While you learn, the tutor will occasionally ask you a short *check* — a question that tests whether the idea landed. Answer it like any other message. Correct answers earn XP on the spot, and every check feeds the lesson report described in Chapter 6.

 The AI now tracks recurring misconceptions during your session. If it revisits a concept from a different angle, that is intentional — it is helping you correct a gap!

## 5.2 You Stay in Control

The tutor decides when to teach and when to check, but you can redirect it at any moment, in plain language:

- "Quiz me on this lesson" — the tutor switches to asking you questions.
- "Let's get back to the lesson" — the tutor returns to explaining.
- "That was too hard — go slower" — the tutor adjusts its pace.
- "Give me a harder one" — the tutor raises the challenge.

There is no wrong way to ask. The tutor follows your lead.

## 5.3 The Status Line

When the tutor needs a moment — reading lesson notes, surveying a module, or looking for related courses — a short grey line appears in the panel, such as "Reading the lesson notes...". It tells you what the tutor is doing and disappears as soon as the answer arrives. Status lines are never saved into your conversation.

## 5.4 A Tutor That Knows Your Journey

Your tutor greets returning students naturally — it knows your streak, the lessons you have studied, your current Bloom level, and a recent weak topic, and it weaves them into the conversation when helpful. Once you have built up enough history, it can also reflect your growth honestly: what you have genuinely mastered and what still needs work. It will never invent progress you have not made.



New account? The tutor simply starts fresh — the personal touches appear as your history grows.




## 5.5 What You Can Ask


- Explain concepts or terminology from the lecture notes.
- Provide real-world examples or engineering applications.
- Walk through problem-solving steps or derivations.
- Show how a concept connects to other topics in the course.
- Clarify formulas, equations, or worked examples.

Asking earns XP too: a short question (fewer than 15 words) earns **+5 XP**; a detailed question (15 words or more) earns **+15 XP** and qualifies for the Deep Dive badge!



## 5.6 Quick Actions

The Quick Actions bar sits above the prompt box and gives you one-tap access to advanced AI features:

-  **Today's Brief** — a personalised study agenda for today (Chapter 10).
-  **Hint 1** — a progressive hint during a check (Chapter 10).
-  **Debate Me** — challenge the AI to argue the opposite view for 3× XP (Chapter 10).

The  **My Progress** button in the toolbar gives you the AI-narrated performance summary (Chapter 10).

## 5.7 Text-to-Speech

Click  **Read Latest** to hear the AI's most recent response read aloud. Use the  gear icon to adjust voice, speed, and volume settings.

# 6. Checks, Scores & Reports

## 6.1 How Checking Works

Checking your understanding is part of the conversation. The tutor decides when a quick question fits — or you can ask to be quizzed at any time ("quiz me"). Each answer is scored from 0 to 100 behind the scenes, mapped to a Bloom's Taxonomy level, and rewarded with XP immediately.

## 6.2 How Bloom's Taxonomy XP Works

The AI evaluates every answer at one of six Bloom's Taxonomy levels and assigns a score from 0–100. Your XP reward is proportional to your score.

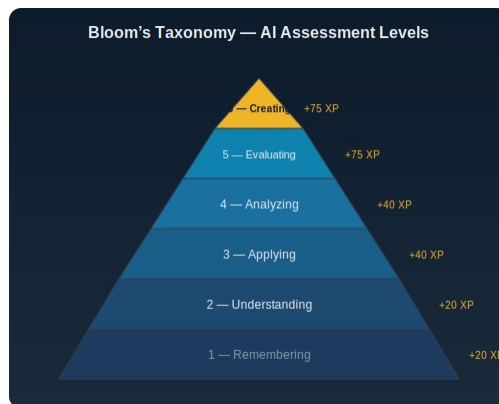


Figure 11: Bloom's Taxonomy pyramid — levels and XP rewards

Level	Cognitive Skill	Max XP	Example
1 — Remembering	Recalling facts	20 XP	Define viscosity
2 — Understanding	Explaining concepts	20 XP	Explain Newton's law
3 — Applying	Using knowledge	40 XP	Calculate kinematic viscosity
4 — Analyzing	Finding patterns	40 XP	Compare laminar vs turbulent
5 — Evaluating	Making decisions	75 XP	Critique a fluid selection
6 — Creating	Designing solutions	75 XP	Design a

			measurement system
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Example: if the AI evaluates your answer as Applying level and awards a score of 80/100, you earn  $40 \times 0.80 = 32$  XP (plus your streak multiplier).

### 6.3 Saving and Revisiting Reports

Whenever a lesson is loaded, the report buttons appear in the AI Tutor panel:

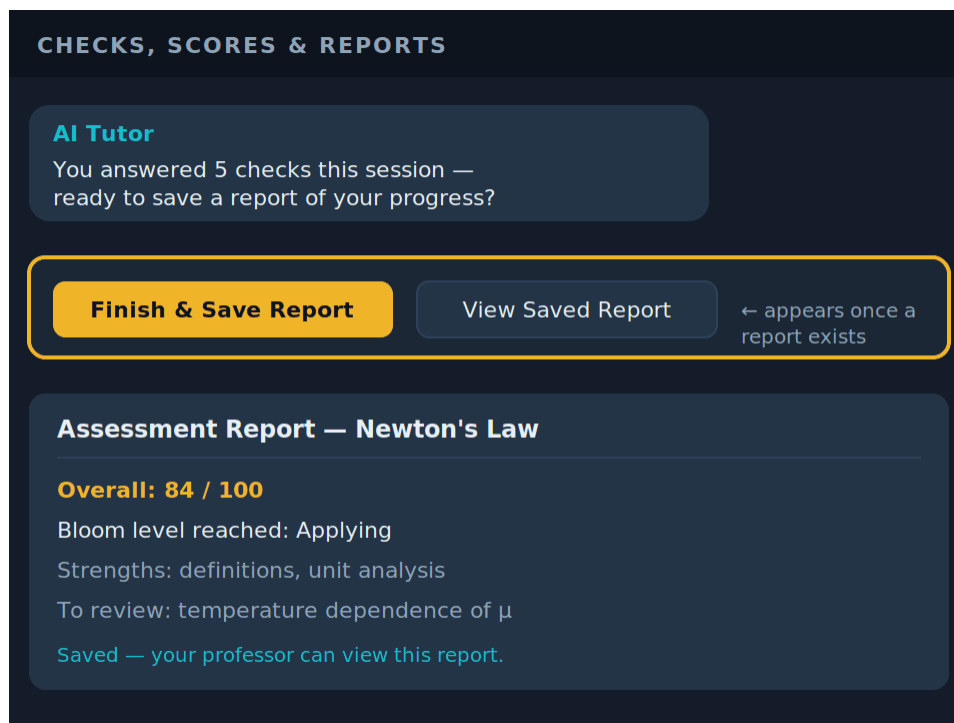




Figure 12: The report buttons — save a report of your session, and revisit it any time

1. When you have answered some checks, click **Finish & Save Report**.
2. The AI uses a deep reasoning model to write a comprehensive performance report — your score, Bloom level, strengths, and what to review — and saves it automatically. You earn **+100 XP**.
3. From then on, a  **View Saved Report** button appears whenever you open that lesson, so you can revisit the report any time.

 Your professor can view your saved reports too — they are a great way to show your progress and to get targeted help.

## 7. Studying Beyond One Lesson

### 7.1 Ask About a Topic, a Module, or the Whole Course

You are not limited to one lesson at a time. Select a **topic, a module, or the course itself** in the Knowledge Tree, and the tutor surveys everything inside it. This is perfect for revision and for big-picture questions:

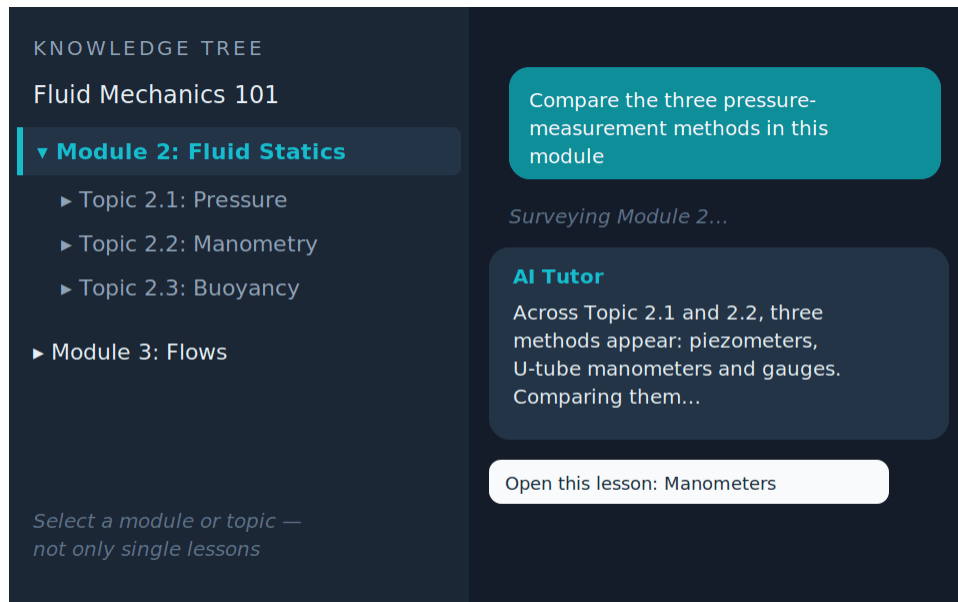


Figure 13: Select a module in the tree and ask across all of its lessons

- "Compare the three pressure-measurement methods in this module."
- "Summarise what this topic is really about."
- "Quiz me across the whole course."

### 7.2 Open-This-Lesson Shortcuts

When the tutor's answer draws on other lessons, it attaches up to three 📖 **Open this lesson** buttons under the reply. Click one and that lesson opens immediately — the fastest way to follow a thread through your course.

### 7.3 Suggestions Beyond Your Course

If a topic you need goes beyond the current course, the tutor can point you onward: first to other lessons inside your course, and then to **other courses you have access to** that teach that topic or prerequisite. Just ask things like "Where can I learn more about differential equations?" — the tutor will name the places you can actually go.

## 8. Gamification System

The gamification system tracks your progress globally — your XP, level, streak, and badges persist across all courses, not just one.

## 8.1 XP Rewards Summary

Action	XP Reward
Asking the Tutor (short, < 15 words)	+5 XP
Asking the Tutor (detailed, 15+ words)	+15 XP
Opening a new lesson	+10 XP
Check answered — Remembering / Understanding	up to +20 XP
Check answered — Applying / Analyzing	up to +40 XP
Check answered — Evaluating / Creating	up to +75 XP
Finishing a report	+100 XP
Completing a Study Timer round	+25 XP
Daily login bonus (scales with streak)	+25 to +200 XP
Surprise reward (20% chance per AI response)	+75 XP
Peer Debate answer	3× normal XP

## 8.2 Engineer Career Levels

Progress through ten engineer career titles as you accumulate XP:

Level	Title	XP Required
Level 1	Freshman Engineer	0 XP
Level 2	Lab Technician	200 XP
Level 3	Junior Analyst	500 XP
Level 4	Field Engineer	1,000 XP
Level 5	Design Engineer	2,000 XP
Level 6	Systems Integrator	4,000 XP
Level 7	Senior Engineer	7,000 XP
Level 8	Lead Engineer	11,000 XP
Level 9	Principal Engineer	16,000 XP
Level 10	Chief Engineer	25,000 XP






## 8.3 Streak Multiplier

Studying every day builds your streak, which multiplies all XP you earn:

- 1–2 day streak: ×1.0 (normal XP)
- 3–6 day streak: ×1.5 XP
- 7–29 day streak: ×2.0 XP
- 30+ day streak: ×3.0 XP










A warning banner appears if you are at risk of losing your streak. Starting a Study Timer round dismisses the warning and counts as active study.

## 8.4 Badges

Badge	How to Earn It
 First Spark	Complete your first tutoring session
 On Schedule	Study 3 consecutive days (builds streak)
 Deep Dive	Send a question longer than 15 words
 Bloom's Peak	Reach Evaluating or Creating level in a check
 Sharpshooter	Score 80 or above on a check

## 8.5 Lesson Mastery Stars


Each lesson card in the Learning Dashboard shows a star rating from one to three:


-    1 Star — you have opened and started the lesson.
-    2 Stars — you have saved a report for this lesson.
-    3 Stars — you have reached Evaluating or Creating level (Bloom's Peak).

Stars only ever increase — they never decrease.

## 9. Study Timer

The Study Timer is located at the bottom of the Learning Dashboard. It helps you study in focused bursts using the Winnable Round format.

1. Select a duration: 10, 15, or 25 minutes from the dropdown.
2. Click  **Start** to begin the countdown.
3. Study during the timer. The progress bar turns red in the final 60 seconds.
4. When the round completes, you earn **+25 XP** plus a 20% chance of a surprise reward.

 Starting a Study Timer round also dismisses any streak-at-risk warning, confirming you are actively studying for the day.

## 10. Advanced AI Features

Four powerful AI-driven features deepen your engagement and give you real-time insight into your progress.

### 10.1 Daily Brief

The Daily Brief gives you a personalised study agenda at the start of each session. It summarises what you covered recently, flags your weakest topics, and suggests what to study today.

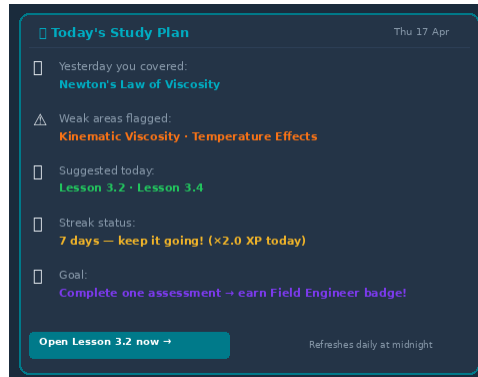




Figure 14: Daily Brief — your personalised daily study agenda

1. Navigate to any lesson (so the AI has course context).
2. Click  **Today's Brief** in the Quick Actions bar.
3. The AI generates a 5-point brief — weak topics, suggested lessons, and a motivational note.
4. Click any suggested lesson name to jump there directly.

 The brief is cached once per day. Clicking it again on the same day shows the same brief instantly — no extra AI call needed.

### 10.2 Hint Ladder

Stuck on a check question? The Hint Ladder gives you up to three levels of progressively more detailed hints — without just giving away the answer.

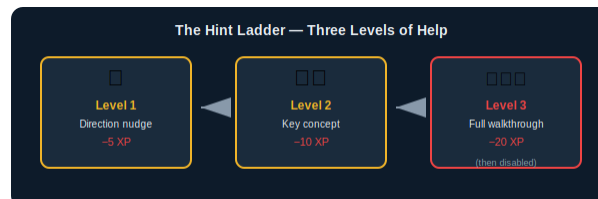




Figure 15: The three-level Hint Ladder — each level costs more XP

- Level 1 Hint: a gentle nudge in the right direction (–5 XP)
- Level 2 Hint: a clearer pointer to the key concept (–10 XP)
- Level 3 Hint: a near-complete walkthrough (–20 XP)

Click  **Hint** while a check question is open. Click again for the next level. After Level 3, the button is disabled for that question and reactivates on the next one.

 Hints cost XP! Attempting the answer yourself first keeps your score higher and earns more XP overall.

### 10.3 Peer Debate Mode

Peer Debate mode challenges your understanding by having the AI argue the opposite position from yours. This technique strengthens critical thinking and helps you defend your reasoning.

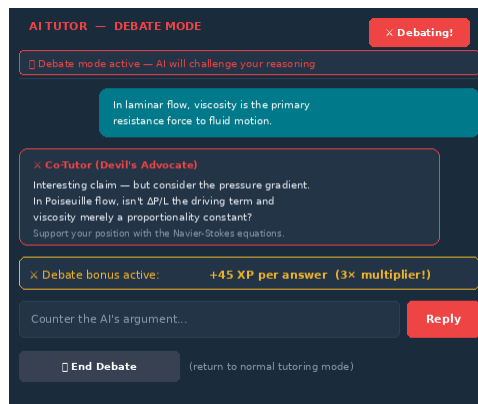





Figure 16: Peer Debate mode — the AI challenges your reasoning

1. Click  **Debate Me** to enter Debate mode.
2. State your position or answer a question as normal.
3. The AI argues against you — respond to its challenges!
4. Click the same button again to end the debate.

 Answers during a debate earn 3× the normal XP, and finishing a debate awards a +50 XP completion bonus — you are demonstrating a deeper level of critical engagement!

### 10.4 Analytics Narrator

The Analytics Narrator gives you a spoken and written summary of your performance trends. Rather than staring at numbers, you hear a human-readable insight report in plain language. It covers:

- Your most and least mastered topics.
  - Your Bloom's level progress over recent sessions.
  - Trends: improving, plateauing, or areas needing attention.
  - A motivational closing note.
1. Click  **My Progress** in the toolbar.
  2. The AI generates a 5-sentence analytics report in the chat.
  3. The report is also read aloud (if Text-to-Speech is enabled).

4. Use the insights to decide what to study next.

## 11. Troubleshooting & FAQ

### **Q: The AI shows an error when I ask a question.**

A: Check your internet connection. The AI Tutor requires an internet connection to think.


### **Q: Where did the Tutoring / Assessment tabs go?**

A: They are no longer needed. The tutor now teaches and checks inside one conversation, and you can steer it by simply asking — say "quiz me" to be tested, or "back to the lesson" to continue learning. Saving a report works exactly as before, with the Finish & Save Report button.

### **Q: How do I start an assessment?**

A: Just ask. Tell the tutor "quiz me on this lesson" (or on the module, or the whole course). When you are done, click Finish & Save Report to record the session.

### **Q: How do I review a past assessment?**

A: Open the lesson — if a saved report exists, the  View Saved Report button appears next to Finish & Save Report. Click it to read the report.

### **Q: I cannot see any courses in My Courses.**

A: Ensure your Root Path is set correctly in your profile (Update Profile) and courses have been published by your professor.

### **Q: My streak was reset!**

A: Streaks reset if you miss a full calendar day without opening a lesson or completing a timer. The warning banner appears before the day ends — start a timer or ask the tutor to keep your streak.

### **Q: Videos are not playing.**

A: Ensure files are in supported formats (MP4, MKV, AVI). YouTube links require an active internet connection.

### **Q: I did not receive my email verification code.**

A: Check your spam folder. The code expires when you close the signup screen. Ensure you entered a valid email address.

### **Q: What does the Daily Brief use to make suggestions?**

A: It reads your most recent check results and XP history to identify weak topics and suggest relevant lessons.

### **Q: I clicked Hint but nothing happened.**

A: Hints are available while a check question is open. Ask the tutor to quiz you first, then request a hint.

### **Q: Does Debate mode count toward my report score?**

A: Debate mode is separate from formal scoring but still earns 3× XP for the engagement.

**Q: Can I use the same account on multiple computers?**

A: Yes. Sign in from any computer — if your account is not found locally, the system checks the cloud and caches it. Your XP and profile sync automatically.