🧪 Cosmetic Science Apprentice Flow

Role: Certified Student Contributor
Scope: Face, Body, Scalp Ingredients
Access Route: `/dashboard/reviewer`

PART I — Ingredient Validation Flow (Human Expert Verified)

1️⃣ Access & Qualification

Apprentice must:

- Be authenticated
- Have certified contributor status
- Have completed coursework-integrated training

System grants access to:
`/dashboard/reviewer`

2️⃣ Review Queue

Apprentice sees:

- Ingredient validation queue
- Flagged ingredients
- Newly added ingredients
- Review-due ingredients (time-based)
- Ingredients added via reformulated products

They select an ingredient.

3️⃣ AI Analysis Review

System displays:

- AI-generated role classification
- AI safety level
- AI explanation
- Scope tags (face/body/scalp)
- Current version (if exists)

Apprentice evaluates scientific accuracy.

4️⃣ Scientific Literature Validation

Apprentice must:

- Locate peer-reviewed literature
- Interpret findings
- Confirm or correct AI outputs

If AI is accurate:

- Confirm

- Still must provide ≥1 peer-reviewed citation

If AI is inaccurate:

- Correct role and/or safety level
- Provide explanation
- Provide ≥1 peer-reviewed citation

5️⃣ Required Submission Fields

Before submission, apprentice must include:

- ✅ Public Explanation (consumer-friendly)
- ✅ ≥1 Peer-Reviewed Citation
- ✅ Confidence Level (High / Moderate / Limited)

Optional:

- Corrected role
- Corrected safety level

Cannot submit without meeting minimum standard.

6️⃣ Validation Becomes Active

System:

- Creates new validation version
- Supersedes prior version
- Updates ingredient record
- Marks ingredient as `expert_verified = true`
- Sets internal 12-month review trigger

7️⃣ Public Result

Every product containing that ingredient now shows:

Ingredient Row Badge:
Human Expert Verified – Cosmetic Science Apprentice (Spelman College)

Product Banner (if ≥1 validated ingredient):
🧠 **Contains Expert-Verified Ingredients**

No faculty involvement at this stage.

PART II — Educational Article Flow (Faculty Required)

Separate pipeline.

1️⃣ Apprentice Writes Article

Route: `/dashboard/articles`

Apprentice drafts:

- Title
- 400–1200 word content
- ≥1 peer-reviewed citation
- Attestation:
  “Based exclusively on publicly available scientific literature.”
- Author display preference (name or anonymous)

Status: `draft`

2️⃣ Submit for Faculty Review

Apprentice clicks:
“Submit for Review”

Status → `submitted`

Editing locked.

3️⃣ Faculty Review

Faculty dashboard:

- View citations

- Review scientific integrity
- Approve / Reject

If rejected:

- Notes required
- Status → `rejected`
- Apprentice revises

If approved:

- Status → `approved`

4️⃣ Publish

Once approved:
Status → `published`

Article becomes visible:

- On ingredient page
- Linked inside relevant product analyses
- Displayed as:
  “Niacinamide Explained by Maya R., Spelman ’27”

Footer:
“Reviewed prior to publication.”

Time-Based Revalidation (Ongoing Loop)

Internally:

After 12 months:

- Ingredient flagged for review

Appears back in apprentice queue:
"Review Updating"

Apprentice may:

- Confirm existing validation
- Update citations
- Create new version

This keeps science evolving.

Full Apprentice Lifecycle

1. Complete coursework training
2. Access reviewer dashboard
3. Validate AI ingredient analyses
4. Provide citation-backed corrections
5. Assign confidence level
6. Earn Human Expert Verified status for ingredient
7. Optionally author educational articles
8. Submit articles for faculty review
9. Contribute to ongoing scientific updates

What the Apprentice Is NOT Responsible For

- EpiQ personalization weighting
- Product-level scoring logic
- Formulation stacking calculations
- Reformulation detection
- Faculty approval of ingredient validations

The Apprentice's Impact

They directly influence:

- Ingredient intrinsic attributes
- Public-facing explanations

- Confidence level indicators
- Academic credibility of platform
- Long-term dataset quality

They do not inflate scores.
They refine scientific accuracy.