Absolutely! Here's your full **GenAI Freedom-Builder Syllabus** — designed for building real-world AI agents, not just chasing credentials. This is the version we finalized, ready for you to use as your step-by-step learning + building path.

**🧠 GenAI Freedom-Builder Syllabus**

**Duration:** ~8 weeks (adjustable)  
**Goal:** Build, deploy, and optionally monetize GenAI/LLM/Agent systems  
**Style:** Learn → Build → Automate → Deploy

**✅ Phase 1 — Core Foundations (Weeks 1–2)**

**🎯 Objectives:**

* Understand LLMs, transformers, attention, embeddings
* Learn prompt engineering with modern patterns (ReAct, CoT, function calling)

**📘 What You'll Learn:**

* Tokenization, self-attention, positional encoding
* Prompt design: summarization, reasoning, extraction, tools
* How to run GPT-4 and Hugging Face models

**📚 Resources:**

* Hugging Face Transformers Course (Ch. 1–4)
* OpenAI Cookbook + Prompting Guide
* Optional: Review key deep learning concepts (transformers, embeddings, optimization)

**🔨 Mini Build:**

* First GPT pipeline: summarizer, reformatter, extractor
* Prompt Library (Notion or Markdown)

**✅ Phase 2 — Agents & Tool Use (Weeks 3–4)**

**🎯 Objectives:**

* Build your first LLM agent with tools, memory, and a task loop
* Learn how to chain steps and automate thought processes

**📘 What You'll Learn:**

* LangChain agents, tools, and memory
* Agent planning logic: ReAct, MRKL, function-calling
* Tool use: web search, calculator, API wrappers

**📚 Resources:**

* LangChain Quickstart & Agent Tutorials
* OpenAI Function Calling Docs

**🔨 Projects:**

* Build one:
  + 📦 Flip Scout Agent
  + 📈 Opportunity Radar Bot
  + 📢 Local Biz Marketing Agent

**✅ Phase 3 — RAG (Retrieval-Augmented Generation) (Week 5)**

**🎯 Objectives:**

* Connect your agent to your own data (PDFs, listings, websites)
* Use vector stores for context-aware responses

**📘 What You'll Learn:**

* Chunking, embedding, and storing text
* Using FAISS / ChromaDB / LlamaIndex
* Creating agents that “know your data”

**📚 Resources:**

* Hugging Face Embedding Docs
* LangChain RAG + LlamaIndex guides

**🔨 Project:**

* Q&A bot over CSVs, Flippa listings, or financial reports

**✅ Phase 4 — Automate & Deploy (Weeks 6–8)**

**🎯 Objectives:**

* Automate your agent’s workflow + deploy with minimal effort
* Output to Notion, Slack, Email, or web UI

**📘 What You'll Learn:**

* Cron jobs, GitHub Actions, Zapier
* Streamlit or Gradio for frontends
* Output formatting + integration

**📚 Resources:**

* Streamlit Docs
* LangChain Output + Callbacks
* Gumroad, Product Hunt, Indie Hackers for monetization paths

**🔨 Final Project:**

* Live, self-updating agent system (e.g., weekly email bot, Slack Q&A, marketing scheduler)

**🧠 Optional Bonus Tracks**

| **Skill** | **When to Learn** | **Why** |
| --- | --- | --- |
| Fine-tuning (LoRA) | If customizing GPT behavior | For ultra-specific bots |
| Open-source LLMs | If you want self-hosted/local | Mistral, Ollama, LM Studio |
| Frontend (Next.js/React) | If building full-blown SaaS | Optional unless you want UI |
| Evaluation + Logging | If scaling | Use LangSmith or Trulens |

**📝 Deep Learning Review (Optional Recap)**

| **Topic** | **Why It Matters** |
| --- | --- |
| Neural Nets + Backprop | Understand model training |
| Embeddings | Core to RAG + similarity search |
| RNNs/LSTMs | Just know why they’re outdated |
| Attention | Foundation of transformers |
| Transformer architecture | How GPT works |
| Optimization | Loss, Adam, regularization |

Let me know if you'd like a downloadable PDF version of this or to expand any part into a full Notion view with embedded links and checkboxes!