24-Session Curriculum Plan

New Age Software Engineering (No-Code Track)

Module 3: Automated Backend Architecture & Integrations

Sessions 1-6 | Focus: Make + OpenAI API

Session #	Topic & "Micro-Build"	Syllabus Coverage	2-Hour Breakdown	The "Aha" Moment
Session 1	**Make Fundamentals: Build Your First AI Email Bot**	*"Integration Tools: Make/Zapier - Setting up accounts and mastering core concepts of triggers, actions, and filters to build workflow logic"*	**0-30m:** Make account setup, navigating the interface, scenarios vs. modules **30-90m:** Build a 3-step workflow: Gmail trigger → Filter mails → Auto-reply **90-120m:** Route different email types, test with real Gmail, debug	A functional email automation that responds intelligently to specific keywords in incoming emails, running live in their Gmail account
Session 2	**Webhooks Unleashed: Instant Notification System**	*"Webhooks and API Intuition - Understanding how external services 'talk' to your visual workflow engine using simple links"*	**0-30m:** Webhooks as "digital doorbells", Make setup, POST vs GET **30-90m:** Build: Webhook URL → Test with Postman → Send to Slack **90-120m:** Reverse flow: Trigger service from Make using outbound webhooks	A working webhook receiver that captures form submissions and instantly posts them to a Slack channel in real-time

Session 3	**Database Magic: Airtable + Make Data Pipeline**	*"Building Data-Driven Workflows - Creating automation flows that read data from Airtable, process it, and save the result"*	**0-30m:** Quick Airtable setup (Leads DB) **30-90m:** Build: Trigger on new row → Enrich with API → Update row **90-120m:** Conditional logic based on status, error handling	An autonomous data enrichment pipeline that automatically enhances their Airtable records whenever they add a new row
Session 4	**OpenAI Integration: Build an AI Content Generator**	*"LLM API Integration via Workflow - Connecting your Make/Zapier flow to a Generative AI API to automate content generation"*	**0-30m:** OpenAI API basics (keys, tokens, pricing) **30-90m:** Build: Airtable trigger → OpenAI API call → Write content back **90-120m:** Advanced prompting, JSON responses, retry logic	A content generation machine that takes product names from Airtable and automatically generates marketing copy using GPT-4
Session 5	**Multi-Step AI Workflows: Smart Report Generator**	*"Designing Automated Features - Creating visual workflows for common product features like automated report generation"*	**0-30m:** Workflow design, iterators & aggregators **30-90m:** Build: Schedule → Fetch records → Analyze → Summarize → Email PDF **90-120m:** Formatting, conditional sending, edge cases	An automated daily report system that analyzes multiple data points, generates insights, and emails a summary every morning

| Session 6 | **Complete Feature Build: Onboarding Automation** | *"Designing Automated Features - Creating visual workflows for common product features like user onboarding emails"* | **0-30m:** Multi-touch sequences, Make delay functions

30-90m: Build: Webhook → Airtable → Email → Delay → Check Status → Follow-up

90-120m: Status update workflow, Slack notification | A complete 3-email onboarding sequence that adapts based on user behavior, with real-time status notifications to Slack |

Module 4: AI-Powered Design & Digital Asset Creation

Sessions 7-12 | Focus: Figma + Midjourney/Flux

Session #	Topic & "Micro-Build"	Syllabus Coverage	2-Hour Breakdown	The "Aha" Moment
Session 7	**AI Wireframing: From Text to Interface**	*"AI for UI/UX Design - Using tools for rapid interface prototyping, generating full-screen layouts from text"*	**0-30m:** Figma setup, AI plugins (Wireframe Designer) **30-90m:** Build: Generate 3 layouts from text → Customize → Annotate **90-120m:** Refinement: Spacing, alignment, components	Three complete wireframe variations of their own product idea, generated from text descriptions and refined into clickable prototypes

Session 8	**High-Fidelity UI with AI: Complete Screen Design**	*"AI for UI/UX Design - Generating full-screen layouts from text, creating production-ready designs"*	**0-30m:** Design systems, Attention Insight, Color generators **30-90m:** Build: Generate landing page → Apply colors → Real copy → Micro-interactions **90-120m:** Responsive design: Auto-layout, mobile breakpoints	A production-ready landing page design with pixel-perfect spacing and mobile responsiveness— created 80% by AI
Session 9	**Visual Branding Blitz: Logo to Mockup**	*"AI for Visual Branding & Marketing - Generating product images, mockups, and company logos with tools like Midjourney"*	**0-30m:** Midjourney basics (Discord setup, prompts, parameters) **30-75m:** Build: Generate 5 logo concepts → Export → Vectorize in Figma **75-120m:** Product mockups: Generate hero images → Place on templates	A complete brand identity package including a professional logo and 3 product mockups
Session 10	**AI Product Photography: Marketing Visuals**	*"AI for Visual Branding & Marketing - Generating product images, mockups, and social media assets"*	**0-30m:** Advanced MJ techniques, Flux/photorealism **30-90m:** Build: Product photography set (5 scenes) → Upscale → Edit **90-120m:** Social media asset pack: Resize for platforms, overlays	A complete social media marketing kit with 15 AI-generated product photos properly sized for 3 major platforms

Session 11	**Pitch Perfect: AI-Generated Presentation**	*"AI for Professional Presentations - Utilizing Gamma for rapidly creating professional pitch decks and explainers"*	**0-30m:** Gamma.app setup, presentation AI structures **30-90m:** Build: 10-slide deck from description → Customize theme → Add visuals **90-120m:** Polish: Refine transitions, presenter notes, export	A complete investor-ready pitch deck for their product idea, with AI-generated content structure and custom visuals
Session 12	**Video Marketing: AI-Powered Product Demo**	*"AI Video Tools for Marketing - Creating short, engaging marketing videos and product demos using AI tools"*	**0-30m:** Runway ML basics, text-to-video **30-90m:** Build: Product demo → Generate B-roll → AI voiceover → Combine **90-120m:** Polish: Music, transitions, overlays	A polished 30-second AI-generated product demo video with professional voiceover and music

Module 5: Product Quality, UI/UX, and Responsible AI

Sessions 13-18 | Focus: Testing, Ethics, Professional Practices

Session #	Topic & "Micro-Build"	Syllabus Coverage	2-Hour Breakdown	The "Aha" Moment
Session 13	**Product Thinking Workshop: From Problem to MVP**	*"Product Thinking - Identifying user pain points, validating ideas with low-fidelity prototypes, and defining the MVP scope"*	**0-30m:** Pain point ID, jobs-to-be-done framework **30-90m:** Build: Lean canvas → Sketch prototype → Peer test → Iterate **90-120m:** MVP scope: MoSCoW method → Document decision	A validated product concept with clear user pain points, sketched prototype, and disciplined MVP feature list

Session 14	**AI UX Patterns: Designing for Uncertainty**	*"UI/UX Principles for AI - Designing user interfaces that gracefully handle AI loading times and potential errors"*	**0-30m:** AI UX challenges (latency, errors), best practices **30-90m:** Build: Design 5 UI states (loading, error, etc.) → Skeleton screens **90-120m:** Interactive prototype with transitions, user testing	A complete Figma prototype demonstrating professional AI loading states and graceful error handling patterns
Session 15	**Workflow Testing Bootcamp: Bulletproofing Make**	*"Visual Workflow Testing - Writing simple test cases and systematically debugging your workflows"*	**0-30m:** Testing philosophy, Make's testing tools **30-90m:** Build: Write 5 test cases per workflow → Execute → Document failures **90-120m:** Fix and harden: Error handlers, fallbacks, alerts	Make workflows that include comprehensive error handling, automated alerts, and documented test coverage
Session 16	**Red Teaming Exercise: Breaking AI Features**	*"Responsible AI and Safety - Understanding bias, data privacy, and guardrail prompting techniques"*	**0-30m:** Red teaming, AI vulnerabilities (jailbreaking), examples **30-90m:** Build: Attack own AI workflows → Document → Implement guardrails **90-120m:** Content moderation API, fallback responses	A hardened AI workflow that successfully blocks harmful inputs/outputs, with documented red team test results

| Session 17 | **Data Privacy & AI Ethics: Building Trust** | *"Responsible AI and Safety - Data privacy, GDPR basics, and building transparent features"* | **0-30m:** GDPR/privacy basics, PII, data retention

30-90m: Build: Audit DB → Minimize data → Privacy policy → Deletion workflow

90-120m: Transparency: Disclosure UI, data export, opt-out | A product with GDPR-compliant data handling, transparent AI disclosure, and user data controls |
| Session 18 | **Professional Documentation: Making It Understandable** | *"Project Planning & Documentation - Using visual tools to manage tasks and documenting your architecture"* | **0-30m:** Importance of documentation, templates

30-90m: Build: Documentation hub → Document workflows → Architecture diagram

90-120m: Runbook: Common errors, API management, checklist | A professional documentation package including architecture diagrams and maintenance guides |

Module 6: Advanced Autonomous AI Agent Integration

Sessions 19-24 | Focus: Replit/Dify + RAG Systems

Session #	Topic & "Micro-Build"	Syllabus Coverage	2-Hour Breakdown	The "Aha" Moment
Session 19	**Agent Fundamentals: First Autonomous Bot**	*"AI Agents 101 - Conceptual understanding of autonomous agents, their components, and use cases"*	**0-30m:** Agents vs simple AI, ReAct pattern, examples **30-90m:** Build: Set up Agent → Web search tool → Multi-step task execution **90-120m:** Complexity: Add calculator tool, test decision-making	A working autonomous agent that independently decides when to search vs calculate, completing multi-step tasks autonomously

Session 20	**RAG System Build: Teaching AI Your Docs**	*"Fundamentals of Retrieval Augmented Generation (RAG) - Teaching AI to use your documents"*	**0-30m:** RAG explained (chunks, embeddings) **30-90m:** Build: Upload docs → Configure chunking → Knowledge base → Test retrieval **90-120m:** Optimize: Chunk size, metadata filters, accuracy measurement	An AI that can accurately answer questions about their specific documents, citing sources and handling "I don't know" gracefully
Session 21	**Agent Tools & Memory: Persistent Intelligence**	*"Connecting Tools and Memory - Granting agents access to external functions and conversation history"*	**0-30m:** Tool calling, memory types **30-90m:** Build: Airtable tool access → Conversational memory **90-120m:** Advanced tools: APIs (Weather, Calendar), testing selection	An agent that remembers context, accesses a database for real data, and intelligently chooses tools based on requests
Session 22	**No-Code Agent Builders: Platform Deep Dive**	*"No-Code Agent Builders - Hands-on tour of visual tools to configure agents without coding"*	**0-30m:** Platform comparison (Replit vs Dify), pricing **30-90m:** Build: Recreate agent in alternative platform → Compare experience **90-120m:** Advanced config: System prompts, temperature, guardrails	Hands-on experience with different agent platforms, understanding their trade-offs

Session 23	**Agent Deployment: Embedding Intelligence**	*"Agent Workflow Integration - Deploying the configured agent into your main application"*	**0-30m:** Integration architectures, authentication **30-90m:** Build: Deploy API → Make workflow → Frontend webhook → Chat UI **90-120m:** Polish: Loading states, error handling, history storage	A fully integrated AI agent living inside their web app, accessible through a native-feeling chat interface
Session 24	**AI Customer Support: Ultimate Application**	*"AI for Automated Customer Support - Implementing AI-powered support features like Intercom AI"*	**0-30m:** Support requirements, ticket logic **30-90m:** Build: RAG knowledge base → Support agent → Handoff logic **90-120m:** Testing: Role-play difficult scenarios, success rate, empathy	A production-grade AI support agent that handles common questions, escalates complex issues, and maintains context