Syllabus: Vibe Coding Training: AI Tools for Developers

> *Comprehensive training in AI-assisted programming and agentic development.*

ℹ️ Information	Details
📅 **Duration**	3 days
👥 **Audience**	Any software developer, tester, QA, architect of any level
💪 **Prerequisites**	Basic programming knowledge, Antigravity IDE, Git
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🎯 Learning Objectives

1. ✅ Understand and practice **Vibe Coding**: collaborative development methodology with AI agents
2. ✅ Master **AI-assisted design** techniques: architecture, modeling, and specifications
3. ✅ Develop efficiently with **code assistance tools**: completion, generation, and refactoring
4. ✅ Ensure **software quality** with AI: automated testing, code review, and anomaly detection
5. ✅ Integrate AI agents into the **complete project lifecycle**: from idea to production

📚 Training Structure

Day 1: Fundamentals and Advanced Prompt Engineering

- Introduction to Vibe Coding and methodology
- Advanced prompt engineering: techniques and patterns
- Tool discovery: Claude Code, Cursor, GitHub Copilot
- Context engineering: effectively managing context
- **Hands-on Lab**: First Vibe Coding project

Day 2: AI Agents and Collaborative Development

- AI agent architecture and orchestration
- Model Context Protocol (MCP) and integrations
- Agent tools: Continue, WindSurf, A2A
- Human-AI collaboration in the development cycle
- **Hands-on Lab**: Multi-agent development

Day 3: Quality, Specifications, and Production

- Specification generation with SpecKit and OpenSpec
- Automated testing and AI-assisted code review
- Architecture and design with BDMAD
- Best practices and development patterns
- **Final Lab**: End-to-end complete project

🛠️ Tools Covered

- 🤖 Claude Code
- ✨ Cursor
- 💎 Google Antigravity
- 🐙 GitHub Copilot
- ▶️ Continue
- 🌊 WindSurf
- 🔌 MCP (Model Context Protocol)
- 📋 SpecKit
- 📖 OpenSpec
- 🏗️ BDMAD
- 🔄 A2A (Agent-to-Agent)

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