



IDEO
COLLEGE
OF TECHNOLOGY



We Are Offering a Complete Course Of

WEB WITH AGENTIC AI

Course Duration :

10 Months



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About Us

Step Into the Future with IDEOCOLLEGE
Dream big, skill up, and lead the digital revolution. At IDEOCOLLEGE, we don't just teach Internet Marketing - we empower you with the future: AI, Cybersecurity, and Blockchain. Join top-level mentors and unlock real career opportunities in the booming IT industry. Hundreds have transformed their lives - now it's your turn. Secure your seat today and shape a smarter tomorrow.



100+
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80+
INSTRUCTORS



80,000+
STUDENTS CONNECTED



Development



Marketing



Networking &
Cyber Security



Art & Design



Multimedia



Business & Accounts



135+
PARTNERS



Online Classes





SALIENT FEATURES



Ideoversity Certificate



Follow-Up Sessions



Practical learning



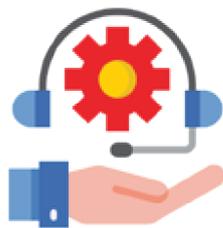
Students Portal



Virtual Internships



Expert Mentorship



Lifetime Support



Career Counseling





Web with Agentic AI - 80 Lectures Course Outline

1. HTML Fundamentals

- Semantic Markups, Headings, Paragraphs
- Lists: Ordered, Unordered, Description
- Tables: Structure, Styling, Accessibility
- Hyperlinks: Internal, External, Anchor Links
- Multimedia: Images, Videos, Audio
- Forms: Input Types, Labels, Buttons
- Embedded Content: iFrames, Maps, YouTube, Calendars

2. CSS Essentials

- CSS Syntax, Selectors, Specificity
- Box Model: Margin, Border, Padding, Content
- Layouts with Flexbox: Direction, Justify, Align
- Grid Systems: Rows, Columns, Areas
- Media Queries & Breakpoints
- Responsive Design Best Practices
- Animations & Transitions: Keyframes, Delays
- Styling Frameworks:
 - : Bootstrap
 - : Tailwind CSS
 - : Chakra UI

3. JavaScript Mastery

Syntax, Variables (let, const), Data Types

Functions, Scope, Closures

DOM Manipulation: Query Selectors, Events

Asynchronous JS: Callbacks, Promises, async/await

RESTful APIs & GraphQL Consumption

Browser APIs: LocalStorage, Canvas, Geolocation

Debugging Tools & Testing Frameworks (Jest)

Google AI Studio & Gemini Integration





- Building Personalized Chatbots
- JavaScript Projects:
 - : Calculator & Games
 - : Weather App
 - : AI Personalized Chatbots

4. Git & GitHub

- Git Basics: init, add, commit, log
- Branching Strategies, Merging, Resolving Conflicts
- GitHub for Collaboration: Pull Requests, Forks
- GitHub Projects, Issues, and Actions
- CI/CD Workflows with GitHub Actions
- GitHub Web Client vs GitHub Desktop

5. React JS Development

- React Basics: JSX, Components, Props
- State Management, Lifecycle Methods
- Hooks: useState, useEffect, useContext
- Routing with React Router
- Advanced State: Redux Toolkit, Context API
- Styling:
 - : Tailwind CSS
 - : Chakra UI
 - : Styled Components
- Admin Dashboards:
 - : MUI Admin
 - : Dashboard Kit
 - : Shadcn UI
- Data Fetching: Axios, Fetch, React Query
- Package Managers: NPM, Yarn, pnpm, bun
- React Projects:
 - : Weather App
 - : Image Editors





: AI Media Generation

6. Next.js Framework

- Pages, Layouts, Routing (Dynamic, Static)
- Data Fetching: SSR, SSG, ISR
- API Routes, Middleware Implementation
- Authentication: NextAuth.js, Firebase Auth
- Full-stack with Prisma + PostgreSQL/MongoDB
- UI Styling:
 - : Full Stack with MONGOdb ORM
 - : Chakra UI
 - : Sass
- Admin UI Templates:
 - : Vercel Admin
 - : AdminLTE
 - : Shadcn UI
- SEO Optimization, Meta Tags, Image Optimization
- Advanced Routing, Middleware, Edge Functions
- Deployment: Vercel, AWS
- AWS Integration: S3, Cognito, SDK
- Package Managers Recap: NPM, Yarn, pnpm, bun

7. Node.js & Express.js

- Core Modules: fs, path, events
- Routing, Middleware, Controllers
- RESTful API Building
- File Uploads with Multer, CORS Setup
- Real-Time Apps: WebSockets, Socket.IO
- Databases: MongoDB (Mongoose), PostgreSQL (Prisma)
- JWT Authentication
- API Security: Helmet, Rate Limiting
- Monitoring: Logs, Analytics
- Deployment: Heroku, Railway, AWS EC2





8. AWS & Cloud Computing

- AWS Core Services:
 - : EC2, S3, ECR, ECS, Lambda, RDS, CloudFront
- Serverless Architecture: Lambda, API Gateway, DynamoDB
- CI/CD Pipelines: GitHub Actions, CodePipeline
- Docker: Images, Containers, Deployment
- Monitoring: AWS CloudWatch, New Relic
- Load Balancing & Auto Scaling
- Full-stack Deployment (Next + Node on AWS)
- Firebase Functions, Hosting, Realtime DB

9. Data Science Introduction

- Python Essentials for Data Science
- Data Cleaning: Pandas, NumPy
- EDA (Exploratory Data Analysis)
- Data Visualization:
 - : Matplotlib
 - : Seaborn
 - : Plotly
- Feature Engineering Techniques
- Time Series Analysis, Anomaly Detection
- Statistics: Hypothesis Testing
- Data Versioning: DVC, MLflow
- Excel-to-Python Transition for Analysts

10. Machine Learning & Deep Learning

- ML Basics: Supervised, Unsupervised
- Algorithms: Regression, Classification, Clustering
- PCA, Feature Selection
- Hyperparameter Tuning: GridSearchCV, Optuna
- Deep Learning:





- : Perceptrons, Neural Nets
 - : CNNs, RNNs, Transformers (GPT, BERT)
- GANs, Transfer Learning
- Frameworks:
 - : Scikit-learn
 - : TensorFlow, Keras
 - : PyTorch
- Model Deployment:
 - : Flask, FastAPI
 - : Hugging Face, ONNX, Sagemaker
 - : TensorFlow Lite
- Projects:
 - : OCR System
 - : Face Recognition
 - : Image Classification
 - : Time Series Prediction

11. Big Data Ecosystem

- Introduction to Big Data
- Hadoop: HDFS, MapReduce, YARN
- Apache Spark: RDDs, DataFrames, MLlib
- Data Lakes vs Warehouses
- Data Pipeline Tools:
 - : Apache Airflow
 - : Apache NiFi
- Big Data on Cloud:
 - : AWS Glue, EMR
 - : Google BigQuery, DataProc
- ETL Pipelines with Spark + Python
- ML at Scale on Big Data





12. Natural Language Processing (NLP)

- Preprocessing: Tokenization, Lemmatization, POS Tagging
- Word Embeddings: Word2Vec, GloVe, BERT
- Text Classification, NER
- Sentiment Analysis with Hugging Face Transformers
- Conversational AI & Chatbots
- Multimodal NLP: Speech + Text + Translation
- Real-Time NLP Chatbots
- NLP Project: Web Assistant

13. Generative AI (GenAI)

- Prompt Engineering: Few-shot, Zero-shot, CoT
- Language Models:
 - : GPT, Claude, Gemini, Mistral, Grok
- Image Generation:
 - : DALL·E, Gemini, ImageFX, Grok
- Audio Gen:
 - : Add Google Veo 3
- Video Gen:
 - : Sora, RunwayML, Invideo AI
- Multimodal Models: CLIP, Flamingo
- Tools:
 - : Notion AI, Canva, ChatGPT Plugins, MS Designer
- AI Use Cases:
 - : Email Writing
 - : Voice Cloning
 - : Avatar Generation
- API Integration: OpenAI, Hugging Face, Replicate
- Custom GPTs and Fine-tuning Techniques





14. Agentic AI & Autonomous Agents

- Foundation of Agentic AI
- Architectures: BDI, Planner, Reflex, Hierarchical
- Multi-Agent Systems: Collaboration, Swarm
- LangChain:
 - : Tool Calling
 - : ReAct
 - : Plan & Execute
- LangGraph: Visual Workflows
- LangSmith: Logging, Feedback
- LangFuse: Observability and Analytics
- Automation Workflows: CrewAI, N8N
- Google Protocols: A2A, MCP
- Agent Dev Kit by Google
- Dialogflow CX & Conversational Agents
- Conversational Agents: Memory, Tools, Dialogue
- Ethics & Safety in Agent Design

15. Business Development & Freelancing

- LinkedIn Profile Optimization
- Fiverr & Upwork Mastery
- Cold Emailing, Client Management
- Portfolio Building: GitHub, LinkedIn
- Contracts, Invoicing: Stripe, Wise, Payoneer
- Passive Income: Courses, Services, eBooks

This comprehensive 80-lecture curriculum merges full-stack web development, cloud, AI, data science, and freelancing into one powerhouse learning track.





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IT TRAINING INSTITUTE

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