



Program Curriculum

# Data Engineering

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**If you work hard and you're  
prepared to leave your comfort  
zone, you'll be amazed at what  
you're capable of.**

**Stephan Leece**

Now Senior Developer @ Grover

**SPICED**

# Hallo! 🖐️

Everyone has to start somewhere.

For us, it started in Berlin with a simple idea. To propel highly motivated people into the careers they want, through expert-led and meticulously curated tech courses.

We don't just teach the latest technologies, though.

Spiced is an attitude. It's a community and a melting pot. It's a place where you can meet and connect with people that could change the trajectory of your life. Those who help you develop professionally and personally. From your cohort and beyond.

Remember, no-one's born a genius – it's going to take hard work and dedication to get where you're going.

We're here with you, every step of the way 🚀



**SPICED**

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## Build your future with Data Engineering

Level up your career with Data Engineering.

From building data pipelines to mastering cloud infrastructure, you'll dive deep into the world of modern data engineering.

Get hands-on with tools like Python, SQL, Apache Airflow, Spark, Docker, and AWS—learning to design scalable, efficient data systems that power real-world applications. You'll work on practical projects that reflect what the job market demands, preparing you to hit the ground running.

But it's not just about tech. It's about your career. We support you with expert coaching on interview strategies, resume crafting, LinkedIn optimization, and career navigation—plus continued support as you launch your next chapter.

Ready to turn raw data into real opportunity? Let's get started 🚀





## Before the Course

Before the course you'll be required to pass a short assessment. Nothing to sweat about, we just want to see how you are with basic concepts that will be important for your success in the course.

Upon successful completion of the assessment, you'll be sent some JavaScript-based prep work to get you ready for the on-site portion of the program.



## What You'll Learn

(16 Weeks)



### Phase 1

Kickstart your journey with advanced Python and data modeling. Learn data structures, functional programming, performance tuning, and error handling—then level up with advanced SQL, relational modeling, normalization, and optimization. In week one, connect with peers, explore the IT industry, and learn how to use AI responsibly to support your career.

### Important Topics

- Python
- SQL
- Error Handling
- Functional Programming
- ER Diagrams

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## Phase 2

In this phase, you'll containerise your apps with Docker and learn how to manage workflows using Airflow and Prefect. You'll also be introduced to dbt to build modular, testable transformations in your data pipelines.

## Important Topics

- Docker
- Apache Airflow
- Prefect



## Phase 3

Learn the fundamentals of cloud computing with AWS. You'll build cloud-native pipelines using Glue, Lambda, and S3, and explore data warehousing with Redshift. Topics include identity and access management, cost optimization, and best practices in cloud architecture.

## Important Topics

- IAM
- Lambda
- RDS
- Glue



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## Phase 4

Work with large-scale datasets using Spark and PySpark, and implement real-time data solutions using Kafka. You'll also gain hands-on experience with NoSQL databases like MongoDB and understand batch vs. stream processing use cases.

## Important Topics

- MongoDB
- Kafka
- PySpark
- Master Spark



## Phase 5

In your final phase, you'll integrate all your knowledge into a capstone project — building and presenting a full-stack data platform. You'll also learn about data governance, metadata, and quality frameworks, while using GitHub Actions and Terraform to automate and deploy infrastructure. This phase includes AWS certification prep and job readiness support.

## Important Topics

- AWS Certification
- Metadata
- Terraform
- Github Actions



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“Most importantly, Spiced feels like a family. When you’re working 8-10 hours a day surrounded by the same people, it’s good to have a supportive work environment and atmosphere.”

**Olof Reimegard**

now Full Stack Web Developer @ Zaplox



## Where practical meets personal

### Our Career Services

Through our Learning Management System (LMS), you'll receive career tips and support from the preparation of application documents to job search strategy and personal branding – all from a single source! Our expert Career Coaches help you excel at real-world interviews, and build your communication skills, critical thinking, teamwork and empathy. 💪

- Job interview workshops
- Strategies for changing jobs and career paths
- Salary negotiations
- Career Cupid: networking event with companies,
- Alumni “Ask me anything” sessions
- Recruiter “Ask me anything” sessions
- Expert panels and Q&A
- Career roadmap for international students



### Phase 1

Identifying your skills



### Phase 2

Understanding the Job Market



### Phase 3

Tips for starting your new job



### Phase 4

Networking

## Career Opportunities

Data Engineer

Cloud Data Engineer

Big Data Engineer

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## Community

Community rules at SPICED – after all, there's more to life than studying! For those in Berlin, we hold regular get-togethers with pizza and drinks in our beautiful campus so you can share ideas, grab a coffee, and generally unwind among fellow hungry minds.

We pride ourselves on our international culture and provide a supportive environment to both students and staff. If you need help with your code or a chat, we try to make sure there's always someone on hand for a quick Zoom, or a sit down.

Oh, and Friday drinks can be the stuff of *legend*.





# Our Campus

Welcome to Kreuzberg. Home to SO36 punks, döners and the loveable rogues of Spiced-World. Just at our doorstep you'll find a world of cuisine, upscale cocktail joints, downtrodden kneipes, and cafes ranging from artisanal to hole-in-the-wall.

We love hosting tech events and bringing our ever-growing network to campus and online for workshops and talks. Even after you've graduated, there's an open invite to our events - once a Spicedling, always a Spicedling.



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# Thank you

For more information, please get in touch  
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