

Data Analytics Python Programming (CSWC-1-SEU) - Summer School 2026

| TIME (CEST) | 26 July Sunday | 27 July Monday | 28 July Tuesday | 29 July Wednesday | 30 July Thursday | 31 July Friday | 1 August Saturday | | | | |
|---------------|--|---------------------|-------------------------------|--|---|--------------------------------|---|------------------------------------|------------|--|--|
| 08:00 - 08:30 | Collective arrival of the participants | | | | | | Free time for excursions, sight-seeing and self-study | | | | |
| 08:30 - 09:00 | | | | | | | | | | | |
| 09:00 - 09:30 | | | | Introduction to Programming: Algorithms, Python basic data types, math operations, conditionals and loops | Standard Data Structures: Comprehensions, Nested Data Structures, Exceptions, Input-Scanner, Debugging | Introduction to Data Analytics | | Data Preparation: Data Cleaning | | | |
| 09:30 - 10:00 | | | | | | | | | | | |
| 10:00 - 10:30 | | Pick-up | | | | | | | | | |
| 10:30 - 11:00 | | Welcome Orientation | | | | | | | | | |
| 11:00 - 11:30 | | | | | Data Analytics Libraries: Dependencies | | | Self-Study | | | |
| 11:30 - 12:00 | | | | | | | | | | | |
| 12:00 - 12:30 | | | Lunch Break | Lunch Break | | | | | | | |
| 12:30 - 13:00 | | | | | | | | | | | |
| 13:00 - 13:30 | | | | | | | | | | | |
| 13:30 - 14:00 | | | Get to know Aachen City Rally | Object Oriented Programming | File handling with python. Structured and unstructured Data Types | Case Study / Group Work | | Data Visualization and Exploration | | | |
| 14:00 - 14:30 | | | | | | | | | | | |
| 14:30 - 15:00 | | | | | | | | | | | |
| 15:00 - 15:30 | | | | | Functions, Constructors, Classes | Case Study / Group Work | | | Self-Study | | |
| 15:30 - 16:00 | | | | | | | | | | | |
| 16:00 - 16:30 | | | | | | | | | | | |
| 16:30 - 17:00 | | | | | | | | | | | |
| 17:00 - 17:30 | | | | | | Barbeque | | | | | |
| 17:30 - 18:00 | | | | | | | | | | | |
| 18:00 - 18:30 | | | | | | | | | | | |
| 18:30 - 19:00 | | | | | | | | | | | |
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| 20:30 - 21:00 | | | | | | | | | | | |
| 21:00 - 21:30 | | | | | | | | | | | |
| 21:30 - 22:00 | | | | | | | | | | | |

Data Analytics Python Programming (CSWC-1-SEU) - Summer School 2026

| TIME (CEST) | 2 August Sunday | 3 August Monday | 4 August Tuesday | 5 August Wednesday | 6 August Thursday | 7 August Friday | 8 August Saturday | | | |
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| 08:00 - 08:30 | | | | | | | | | | |
| 08:30 - 09:00 | | | | | | | | | | |
| 09:00 - 09:30 | | Data Transformation | Artificial Neural Networks and other models | City Trip to Maastricht (The Netherlands) | Preparation for Exam at the accomodation | | | | | |
| 09:30 - 10:00 | | | | | | | | | | |
| 10:00 - 10:30 | | | | | | | | | | |
| 10:30 - 11:00 | | | | | | | | | | |
| 11:00 - 11:30 | | Data Representation: Feature selection and extraction | | | | Farewell | | | | |
| 11:30 - 12:00 | | | | | | | | | | |
| 12:00 - 12:30 | | Lunch Break | | | Lunch Break | | | | | |
| 12:30 - 13:00 | | | | | | | | | | |
| 13:00 - 13:30 | | | | | | | | | | |
| 13:30 - 14:00 | | | | | | Return of Mensa Cards | | | | |
| 14:00 - 14:30 | | Data-driven Learning: Supervised, Unsupervised and Reinforcement Learning | Further Research: State of the Art application areas of AI / Data Analytics | City Trip to Maastricht (The Netherlands) | Final Exam | | | | | |
| 14:30 - 15:00 | Free time for excusions, sight-seeing and self-study | | | | | | | | | Collective departure of the participants |
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