## Course Syllabus

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|---|---|
| **Code - Course Title** | **ÖVA516 - Data Visualization** |
| **Course Type** | II. SEMESTER |
| **Laboratory + Practice** | 3+0 |
| **ECTS** | **6.0** |
| **Language of Instruction** | Türkçe |
| **Course Type** | Elective Courses |
| **Course Instructor(s)** | PROF. DR. EVRİM GENÇ KUMTEPE |

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| **Mode of Delivery** | Distance Education (Online) |
| **Prerequisites** | N/A |
| **Courses Recomended** | Quantitative Data Analysis |
| **Recommended Resources** | Cairo, A. (2012). The functional art: An introduction to information graphics and visualization. New Riders.VanderPlas, J. (2016). Python data science handbook: Essential tools for working with data. O'Reilly Media.Grus, J. (2019). Data science from scratch: First principles with Python (2nd ed.). O'Reilly Media.Dykes, B. (2020). Effective data storytelling: How to drive change with data, narrative and visuals. Wiley.Stephens-Davidowitz, S. (2017). Everybody lies: Big data, new data, and what the Internet can tell us about who we really are. Dey Street Books.Stephens-Davidowitz, S. (2022). Don't trust your gut: Using data to get what you really want in life. William Morrow.The Data Visualisation Project. (n.d.). Retrieved from https://datavizproject.com |
| **Work Placement** | N/A |

## Course Syllabus

| Weeks | Learning Outcomes | Topics | Teaching Methods |
|---|---|---|---|
| **Week - 1** | | Introduction to data visualization | |
| **Week - 2** | | Visualization of quantities | |
| **Week - 3** | | Visualization of distributions | |
| **Week - 4** | | Visualization of ratios | |
| **Week - 5** | | Visualization of relationships | |
| **Week - 6** | | Time-based visualizations | |
| **Week - 7** | | Spatial visualizations | |
| **Week - 8** | | Visual design principles | |
| **Week - 9** | | Errors in the use of color | |
| **Week - 10** | | Redundant coding | |

## Course Syllabus

| Weeks | Learning Outcomes | Topics | Teaching Methods |
|---|---|---|---|
| **Week - 11** | | Multi-panel charts | |
| **Week - 12** | | Project work: Application | |
| **Week - 13** | | Project work: Evaluation | |
| **Week - 14** | | Project work Presentation | |

## Learning Outcomes

| # | Learning Outcome |
|---|---|
| **1** | Will be able to apply data visualization techniques with Python language and popular libraries. |
| **2** | Will be able to present numerical, categorical, spatial and time-dependent data with appropriate graphics. |
| **3** | Will be able to use aesthetic elements such as visual design principles and the use of color effectively. |
| **4** | Will be able to apply approaches to improve user experience and understandability in data visualization processes. |

## Sustainable Development Goals

*No content has been provided.*

## Course Theme

*No content has been provided.*

## AKTS Workload

| Activity | Duration (Hour) | Count | Workload |
|---|---|---|---|
| Teorik Derse Katılım | 0 | 0 | 0 |
| Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı) | 0 | 0 | 0 |
| Ödevler | 0 | 0 | 0 |
| Proje - Rapor - Sunum Hazırlama | 0 | 0 | 0 |
| Ara Sınav Hazırlığı (sınav süresi dahil) | 0 | 0 | 0 |
| Final Sınavı Hazırlığı (sınav süresi dahil) | 0 | 0 | 0 |
| Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.) | 0 | 0 | 0 |
| Staj Uygulaması | 0 | 0 | 0 |
| | | **Calculated ECTS** | **0** |

## Assessment Method and Passing Requirements

*No content has been provided.*