International Program in Survey and Data Science (IPSDS)  
Course development and course instruction 2/2018 to 12/2020

Course development

Courses developed with the kind support of the German Ministry of Education and Research

*Advanced Topics in Official Statistics*
2 ECTS  
Hannal Brenzel, destatis  
Piet Daas, Statistics Netherland  
Marco Puts, Statistics Netherlands  
Date of publication: December 30, 2020

*Ethical Considerations for Data Science Research*
2 ECTS  
Jessica Vitak, University of Maryland  
Date of publication: December 30, 2020

*Experimental Design for Surveys*
4 ECTS  
Roger Tourangeau, Westat  
Date of publication: October 25, 2019

*Introduction to Official Statistics*
2 ECTS  
Walter Radermacher, Federation of European National Statistics Societies FENStatS  
Date of publication: December 30, 2020

*Introduction to Real World Data Management*
4 ECTS  
Alexandru Cernat, University of Manchester  
Date of publication: September 4, 2019

*Introduction to Record Linkage with Big Data Applications*
Extension from 2 to 4 ECTS  
Manfred Antoni, IAB  
Stefan Bender, Bundesbank  
Christian Borgs, University of Duisburg-Essen  
Joseph W. Sakshaug, IAB  
Date of publication: December 30, 2020
Modern Workflows in Data Science
4 ECTS
Alexandru Cernat, University of Manchester
Date of publication: December 30, 2020

Project Consulting Course
12 ECTS
Helmut Küchenhoff, Ludwig-Maximilian-University Munich
Date of publication: December 30, 2020

Usability Testing for Survey Research
2 ECTS
Emily Geisen, Qualtrics
Jennifer Romano-Bergstrom, Google
Date of publication: August 1st, 2019

The course videos developed with the funding of the German Ministry of Education and Research are published online (https://www.elms.umd.edu/) and are available for 6 months after publication.

Username: ipsds.talks@gmail.com
Password: 12jBW8x.09#
Courses developed in cooperation with the University of Maryland

Computer Based Content Analysis I (Theory)
2 ECTS
Heiner Stuckenschmidt, University of Mannheim
Christoph Kilian Theil, University of Mannheim

Computer Based Content Analysis II (Practical)
2 ECTS
Heiner Stuckenschmidt, University of Mannheim
Christoph Kilian Theil, University of Mannheim

Generalized Linear Models
4 ECTS
Thomas Gautschi, University of Mannheim

Introduction to Python and SQL
2 ECTS
Brian Kim, University of Maryland and University of Michigan

Introduction to R
0 ECTS
Heide Marie Jackson, University of Maryland

Machine Learning II
4 ECTS
Trent D. Buskirk, Bowling Green State University Ohio
Christoph Kern, University of Mannheim

Privacy Law
2 ECTS
Thomas Fetzer, University of Mannheim

Review of Statistical Concepts
6 ECTS
Brian Kim, University of Maryland and University of Michigan
Courses developed in cooperation with the University of Michigan

Survey Design in International Contexts
2 ECTS
Zeina Mneimneh, University of Michigan

Course developed in cooperation with Google

Web Survey Methodology and Online Panels with Practical Survey Programming
4 ECTS
Mario Callegaro, Google
Course instruction

2017/2018 Winter Term

Introduction to Record Linkage with Big Data Applications
2 ECTS
Manfred Antoni, Institute for Employment Research
Stefan Bender, Deutsche Bundesbank
Joseph Sakshaug, Institute for Employment Research

Usability Testing for Survey Research
2 ECTS
Emily Geisen, Qualtrics
Jennifer Romano-Bergstrom, Google

2018 Spring Term

Data Confidentiality and Statistical Disclosure Control
4 ECTS
Jörg Drechsler, Institute for Employment Research

Introduction to Machine Learning and Big Data (ML I)
2 ECTS
Trent Buskirk, Bowling Green State University, Ohio
Frauke Kreuter, University of Mannheim
In cooperation with JPSM/UMD

Web Scraping and APIs
2 ECTS
Simon Munzert, Hertie School of Governance Berlin

Introduction to Data Visualization
2 ECTS
Richard Traunmüller, University of Mannheim
In cooperation with JPSM/UMD

Questionnaire Design
4 ECTS
Florian Keusch, University of Mannheim
In cooperation with JPSM/UMD
2018 Summer Term

Introduction to Python and SQL
2 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

Introduction to Real World Data Management
4 ECTS
Alexandru Cernat, The University of Manchester

Review of Statistical Concepts
6 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

2018 Fall Term

Fundamentals of Survey and Data Science
6 ECTS
Carolina de los Angeles Casas-Cordero Valencia, Pontifical Catholic University of Chile
In cooperation with Catholic University of Chile

Data Collection Methods
6 ECTS
Christopher Antoun, University of Maryland
In cooperation with JPSM/UMD

Sampling I
4 ECTS
Raphael Nishimura, University of Maryland

Experimental Design For Surveys
4 ECTS
Roger Tourangeau, Westat

Introduction to Python and SQL
2 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

Privacy Law
2 ECTS
Thomas Fetzer, University of Mannheim
In cooperation with JPSM/UMD

Item Nonresponse and Imputation
2 ECTS
Jörg Drechsler, Institute for Employment Research

Project Consulting Course
12 ECTS
Helmut Küchenhoff, Ludwig-Maximilians-Universität Munich

2018/2019 Winter Term

Computer Based Content Analysis I (Theory)
2 ECTS
Heiner Stuckenschmidt, University of Mannheim,
Christoph Kilian Theil, University of Mannheim
In cooperation with JPSM/UMD

Computer Based Content Analysis II (Practical)
2 ECTS
Heiner Stuckenschmidt, University of Mannheim
Christoph Kilian Theil, University of Mannheim
In cooperation with JPSM/UMD

Analysis of Complex Survey Data
4 ECTS
Benjamin M. Reist, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

Multiple Imputation – Why and How
2 ECTS
Jörg Drechsler, Institute for Employment Research

Web Survey Methodology and Online Panels with practical survey programming
4 ECTS
Mario Callegaro, Google
In cooperation with Google/JPSM/UMD

Introduction to Record Linkage with Big Data Applications
2 ECTS
Manfred Antoni, Institute for Employment Research
Stefan Bender, Deutsche Bundesbank
Joseph Sakshaug, Institute for Employment Research
Usability Testing for Survey Research
2 ECTS
Emily Geisen, Qualtrics
Jennifer Romano-Bergstrom, Google

2019 Spring Term

Fundamentals of Survey and Data Science
6 ECTS
Carolina de los Angeles Casas-Cordero Valencia, Pontifical Catholic University of Chile
In cooperation with Catholic University of Chile

Generalized Linear Models
4 ECTS
Thomas Gautschi, University of Mannheim
In cooperation with JPSM/UMD

Data Confidentiality and Statistical Disclosure Control
4 ECTS
Jörg Drechsler, Institute for Employment Research
In cooperation with MBS

Questionnaire Design
4 ECTS
Gina K. Walejko, U.S. Census Bureau

Practical Tools for Sampling Part I
4 ECTS
Jill Dever, RTI
In cooperation with JPSM/UMD

Introduction to Machine Learning and Big Data (ML I)
2 ECTS
Trent Buskirk, Bowling Green State University, Ohio
Frauke Kreuter, University of Mannheim
In cooperation with JPSM/UMD

Introduction to Data Visualization
2 ECTS
Richard Traunmüller, University of Mannheim
In cooperation with JPSM/UMD
Web Scraping and APIs
2 ECTS
Simon Munzert, Hertie School of Governance Berlin
In cooperation with MBS

2019 Summer Term

Review of Statistical Concepts
6 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

Survey Design and Implementation in International Contexts
2 ECTS
Zeina Mneimneh, University of Maryland and University of Michigan

Introduction to Real World Data Management
4 ECTS
Alexandru Cernat, The University of Manchester

Introduction to Python and SQL
2 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD

2019 Fall Term

Experimental Design For Surveys
4 ECTS
Ashley Amaya, RTI

Fundamentals of Survey and Data Science
6 ECTS
Alexander Wenz, University of Mannheim
In cooperation with JPSM/UMD

Sampling I
4 ECTS
Raphael Nishimura, University of Maryland

Introduction to Python and SQL
2 ECTS
Brian Kim, University of Maryland and University of Michigan
In cooperation with JPSM/UMD
Practical Tools (Part II) for Survey Weighting
2 ECTS
Jill Dever, RTI

Privacy Law
2 ECTS
Thomas Fetzer, University of Mannheim
In cooperation with JPSM/UMD

Item Nonresponse and Imputation
2 ECTS
Jörg Drechsler, Institute for Employment Research
In cooperation with MBS

Computer Based Content Analysis I (Theory)
2 ECTS
Christoph Kilian Theil, University of Mannheim
In cooperation with JPSM/UMD

2020 Spring Term

Project Consulting course
6 ECTS
Helmut Küchenhoff, Ludwig-Maximilians-Universität Munich

Questionnaire Design
4 ECTS
Gina K. Walejko, U.S. Census Bureau

Web Survey Methodology
4 ECTS
Mario Callegaro, Google & Vlad Achimescu, University of Mannheim
In cooperation with Google/JPSM/UMD

Computer-Based Content Analysis II
2 ECTS
Christoph Kilian Theil, University of Mannheim
In cooperation with JPSM/UMD

Introduction to Machine Learning and Big Data
2 ECTS
Frauke Kreuter, University of Mannheim & Trent Buskirk, Bowling Green State University, Ohio
In cooperation with JPSM/UMD
**Generalized Linear Models**  
4 ECTS  
Thomas Gautschi, University of Mannheim  
*In cooperation with JPSM/UMD*

**Introduction to Data Visualization**  
2 ECTS  
Richard Traunmüller, University of Mannheim  
*In cooperation with JPSM/UMD*

### 2020 Summer Term

**Introduction to Real World Data Management**  
4 ECTS  
Alexandru Cernat, University of Manchester  
*In cooperation with JPSM/UMD*

**Modern Workflows in Data Science**  
4 ECTS  
Alexandru Cernat, University of Manchester

**Introduction to Python/SQL**  
2 ECTS  
Brian Kim, University of Maryland and University of Michigan  
*In cooperation with JPSM/UMD*

**Introduction to Record Linkage**  
4 ECTS  
Manfred Antoni, Institute for Employment Research  
Stefan Bender, Deutsche Bundesbank  
Joseph Sakshaug, Institute for Employment Research

**Web Scraping and APIs**  
2 ECTS  
Simon Munzert, Hertie School of Governance Berlin  
*In cooperation with JPSM/UMD*

**Machine Learning II**  
4 ECTS  
Trent D. Buskirk, Bowling Green State University Ohio  
Christoph Kern, University of Mannheim  
*In cooperation with JPSM/UMD*
Analysis of Complex Survey Data  
4 ECTS  
Ben Reist, NASA  
*In cooperation with JPSM/UMD*

**2020 Fall Term**

*Advanced Official Statistics*  
2 ECTS  
Hanna Brenzel, Destatis  
Piet Daas, Statistics Netherlands  
Marco Puts, Statistics Netherlands

*Ethical Considerations for Data Science Research*  
2 ECTS  
Jessica Vitak, University of Maryland

*Introduction to Official Statistics*  
2 ECTS  
Walter J. Radermacher

*Modern Workflows in Data Science*  
4 ECTS  
Alexandru Cernat, University of Manchester

*Introduction to Python/SQL*  
2 ECTS  
Brian Kim, University of Maryland and University of Michigan  
*In cooperation with JPSM/UMD*