Program: IPSDS, International Program in Survey and Data Science
Degree: Professional Master's degree
Partners: JPSM/University of Maryland; University of Mannheim
Websites: https://jpsm.umd.edu/landingtopic/online-programs
https://survey-data-science.net/

Characteristics of the IPSDS Professional Master's

Audience

The IPSDS degree is a "professional degree" and therefore geared towards students who are already working in the field. The program is international; students are located around the globe. The language of instruction is English.

Credits/Offerings

The Professional Masters is 30 credits in Maryland and 75 ECTS in Mannheim. The curriculum focuses on breadth and offers many introductory courses to fulfill students' education needs. There are some core courses (explained in the Curriculum section).

Terms/Semesters

Fall Semester: September 1st – December 15
Spring Semester: January 15 – May 15
Summer Term: June 1st – August 15 (very few courses, mostly in June)

Curriculum for IPSDS

There are 5 focus areas for the curriculum. Some courses are designated as essential to becoming a survey and data scientist and labeled as "core". Some core courses are mandatory (outlined in black in the table below) and others are optional. The core courses in Maryland and Mannheim vary slightly, but participants of both universities attend the courses together. To achieve the Maryland degree, students must complete 19 core credits across the 5 focus areas and 11 elective credits. To achieve the Mannheim degree, students must complete 56 core ECTS across the 5 focus areas and 4 elective ECTS.
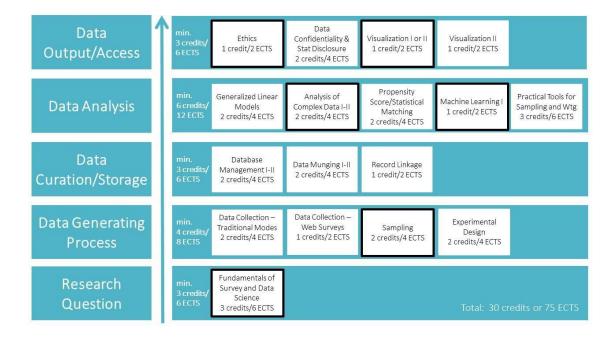
- Fundamentals of Survey and Data Science
    - Overview of survey lifecycle and errors in survey and big data
    - Preferred that this is the first course completed
    - Can serve as a prerequisite for other courses
- Electives can be courses not listed as core + core courses not taken to fulfill a requirement

- Examples of elective (but not core) courses: Web scraping, Usability Testing in Surveys, Small Area Estimation, Measurement Error Models

Data Output/Access	min. 3 credits/ 6 ECTS	Ethics 1 credit/2 ECTS	Data Confidentiality & Stat Disclosure 2 credits/4 ECTS	Visualization I or II 1 credit/2 ECTS	Visualization II 1 credit/2 ECTS	
Data Analysis	min. 6 credits/ 12 ECTS	Generalized Linear Models 2 credits/4 ECTS	Analysis of Complex Data I-II 2 credits/4 ECTS	Propensity Score/Statistical Matching 2 credits/4 ECTS	Machine Learning I 1 credit/2 ECTS	Practical Tools for Sampling and Wtg 3 credits/6 ECTS
Data Curation/Storage	min. 3 credits/ 6 ECTS	Database Management I-II 2 credits/4 ECTS	Data Munging I-II 2 credits/4 ECTS	Record Linkage 1 credit/2 ECTS		
Data Generating Process	min. 4 credits/ 8 ECTS	Data Collection – Traditional Modes 2 credits/4 ECTS	Data Collection – Web Surveys 1 credits/2 ECTS	Sampling 2 credits/4 ECTS	Experimental Design 2 credits/4 ECTS	
Research Question	min. 3 credits/ 6 ECTS	Fundamentals of Survey and Data Science 3 credits/6 ECTS				Total: 30 credits or 75 ECTS

Instructor Information
- Course website administered using Canvas. All material for the class should be here, organized by week. All communication should be through the website.
- Weekly discussions (50 minutes) using video conferencing system "Zoom"
- Number of credits correlates with number of units/weeks of instruction
  - 1 credit = 4 units/weeks
  - 2 credits = 8 units/weeks
  - 3 credits = 12 units/weeks