Kursbeskrivning doktorandkurs i psykologi

Course description doctoral course psychology

Detta är en mall för beskrivning av doktorandkurser i psykologi vid Psykologiska institutionen, Stockholms universitet. Vänligen fyll i kursinformationen i blåmarkerade fält.

This is a template for the description of doctoral courses in psychology at the Department of Psychology, Stockholm University. Please fill in the blue-highlighted fields.

Kurstitel	Course title
	Python Programming for Social Scientists
Max 120 tecken	Maximum 120 characters

Högskolepoäng (hp)	Course credits (ECTS)
hp	3 ECTS

Kurskod	Course code
PS	PS
Exempel på kurskod: PSAWF01. Om du saknar kurskod, lämna detta fält tomt.	Example of course code: PSAWF01. If you have no course code, leave this field empty.

Gäller från termin	Valid from semester
	HT24
Ange först termin som kursen ges	Indicate the first semester the course is given

Behörighetskrav	Entry requirements
	None, but it is recommended to be familiar with basic programming concepts like variables, for-loops, if-statements, and functions. Students who are entirely new to programming are advised to watch '*Introduction to Programming and Computer Science - Full Course*' by freeCodeCamp or a similar video.
Om specifika behörighetskrav finns. ange dessa. Om innga särskilda krav finns, ange "antagen till forskarutbildning i psykologi".	If there are specific entry requirements, state these. If there are no specific requirements, state "admitted to doctoral studies in psychology".

Lärandemål	Learning outcomes
	To pass the course, the student should be able to - Explain and use basic Python syntax - Work with fundamental data structures using Panda - Load, save, and preprocess data in various formats - Create data visualizations using Matplotlib - Perform data analysis using NumPy and SciPy - Explain the basics of object-oriented programming
De förväntade studieresultaten i punktform. Exempel:	Expected learning outcomes in point form. Example:

För godkänt resultat på kursen ska studenten kunna: - definiera… - beskriva… - redogöra för… - analysera… - problematisera…	To pass the course, the student should be able to - define... - describe... - account for... - analyze... - problematize...

Kursinnehåll	Course content
	The course consists of four half-day workshops. Each workshop starts with a lecture and is followed by a lab session in which students work on exercises, under guidance of the course leader. The exercises are designed to reflect scenarios commonly encountered in social science research. **Workshop 1: Python fundamentals** - Basic syntax, variables, and data types - Control structures (for, while, if) - Working with lists, tuples, and dictionaries - Writing functions - Using libraries **Workshop 2: Working with data in Python** - Loading and saving data - Working with data frames (Pandas) - Visualizing data **Workshop 3: Data analyses in Python** - Array operations and basic math using NumPy - Exploratory data analysis - Data cleaning - Statistical analyses using SciPy **Workshop 4: Introduction to object-oriented programming (OOP) in Python** - What is object-oriented programming? - Classes and objects - Methods - Encapsulation, abstraction, inheritance, polymorphism
Beskriv kortfattat kursens innehåll. Fokus bör ligga på vad som behandlas på kursen, på vilka kunskaper som förmedlas och på vad studenten kan förväntas lära sig.	Briefly describe the content of the course. The focus should be on what is covered in the course, what knowledge is imparted and what the student can be expected to learn.

Obligatoriska moment	Mandatory
	Attendance is compulsory for all workshops.
Ange om det finns obligatorisk närvaro, obligatoriska uppgifter, obligatorisk närvaro, etc.	Indicate whether there is compulsory attendance, compulsory tasks, compulsory attendance, etc.

Examinationsformer	Examination
0	Each workshop is accompanied by a take-home assignment with practical exercises. Students hand in reports of their solutions, which are graded with pass/fail (in case of fail, an opportunity is provided to

	complement the report). To pass the course, a student needs to have a passing grade on every assignment.
Ange samtliga examinationsformer som används	Please specify all forms of examination on the course

Arbetsformer	Forms of teaching
	The teaching consists of four half-day workshops, each of which starts with a short lecture and is followed by a seminar during which students work through a number of exercises.
Ange vilka former av undervisning (inte specifika aktiviteter) som förekommer på kursen. Exempel: Undervisningen utgörs av… föreläsningar, seminarier, övningar, grupparbete, handledning, och laborationer. För läskurs, ange "läskurs".	Indicate which forms of teaching (not specific activities) occur on the course. Example: The teaching consists of ... lectures, seminars, exercises, group work, supervision, and laboratory work. For reading course, state "reading course".

Kursansvarig	Course leader
	Ronald van den Berg