Course overview: **Bayesian Statistics and Machine Learning**
Winter term 2017/18

Lectures: Thursdays, 10:15-12:00
Exercises/Tutorials: Thursdays, 12:30-14:00

in the Deptartment Of Psychology, Gutenbergstr. 18, Room G1 (00018).

If you want the course credit:

1.) sign up officially
2.) work on at least 60% of the exercises, and present your solutions
3.) pass the exam at the end

Foundations of Probability		
Date	**Lecture**	**Tutorial/Exercises**
19.10.17	1. Introduction	Python
26.10.17	2. Uncertainty representations	Linear Algebra
02.11.17	3. Conditioning	Vector Analysis, ex. 2
09.11.17	4. Probability distributions	Optimization, ex. 3
Bayesian Reasoning and Networks		
16.11.17	5. Bayesian Networks, Causality	Theano, ex. 4
13.11.17	6. D-Separation, Hypothesis testing	Exercises 5
30.11.17	7. Message passing	Exercises 6
07.11.17	8. Variational free-energy approximation	Exercises 7
Stochastic Processes		
07.11.17	9. Sampling	Exercises 8
14.12.17	10. Dirichlet and Indian Buffet Process	Exercises 9
21.12.17	11. Gaussian processes	Exercises 10
Neural Networks and Deep Learning		
11.01.17	12 .Model Neurons and Networks	Exercises 11
18.01.17	13. Backpropagation	Exercises 12
25.01.17	14. Deep learning	Exercises 13

01.02.17	Deep Learning	Q+A for the exam
08.02.17	Exam	