Perception: Psychophysics and Modeling

01b | Course outline

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Timetable *Perception: Psychophysics and Modeling* 2021/22

Day	Date	#VL	Content
Mo	18.10.2021	0	Course admin | Overview
Do	21.10.2021	—	no lecture: reading assignements and online lectures
Mo	25.10.2021	—	no lecture: reading assignements and online lectures
Do	28.10.2021	—	no lecture: reading assignements and online lectures
Mo	01.11.2021	—	no lecture (Allerheiligen / All Saints)
Do	04.11.2021	—	no lecture: reading assignements and online lectures
Mo	08.11.2021	1	How to study vision?
Do	11.11.2021	—	no lecture: reading assignements and online lectures
Mo	15.11.2021	2	Linear systems, Fourier transform and optics
Do	18.11.2021	3	Human eye and retina
Mo	22.11.2021	4	Psychophysics and Experimental Design
Do	25.11.2021	5	Spatial Vision I
Mo	29.11.2021	6	Spatial Vision II
Do	02.12.2021	—	no lecture: reading assignements and online lectures
Mo	06.12.2021	7	Object Recognition I
Do	09.12.2021	8	Object Recognition II
Mo	13.12.2021	9	Object Recognition III
Do	16.12.2021	10	Object Recognition IV
Mo	20.12.2021	—	no lecture (Weihnachtsferien / Christmas holiday)
Do	23.12.2021	—	no lecture (Weihnachtsferien / Christmas holiday)
Mo	27.12.2021	—	no lecture (Weihnachtsferien / Christmas holiday)
Do	30.12.2021	—	no lecture (Weihnachtsferien / Christmas holiday)
Mo	03.01.2022	—	no lecture (Weihnachtsferien / Christmas holiday)
Do	06.01.2022	—	no lecture (Weihnachtsferien / Christmas holiday)
Mo	10.01.2022	11	Scene Perception
Do	13.01.2022	12	Visual Attention
Mo	17.01.2022	13	Visual Saliency
Do	20.01.2022	14	Colour Vision I
Mo	24.01.2022	15	Colour Vision II
Do	27.01.2022	16	Auditory Perception I
Mo	31.01.2022	17	Auditory Perception II
Do	03.02.2022		Q & A I
Mo	07.02.2022		Q & A II
Do	10.02.2022		**Exam**

Important: This table is always up-to-date on:

https://uni-tuebingen.de/fakultaeten/mathematisch-naturwissenschaftliche-fakultaet/fachbereiche/informatik/lehrstuehle/neuronale-informationsverarbeitung/teaching/lectures-seminars/winter-term-202122/timetable-vl-perception-psychophysics-and-modeling-bsc/

Please re-check this page regularly!

Asynchronous videos … and when you need to have watched them

Videotitle	Needs to be watched before lecture …	Link
Gegenfurtner | *Folge 1* | *Einführung*	VL 1 | How to study vision	https://www.youtube.com/watch?v=sYhsKCHkkTw&t=1s
Gegenfurtner | *Folge 2* | *Neuronale Verarbeitung*	VL 1 | How to study vision	https://www.youtube.com/watch?v=2aCsLHblMjc&t=10s
Kanwisher | *Marr's Levels of Analysis*	VL 1 | How to study vision	https://www.youtube.com/watch?v=Di_3pGAveGs
Hoffman | *Computational Theory of Mind*	VL 1 | How to study vision	https://www.youtube.com/watch?v=cUhrK82seVY
Chomsky | *Brain and Mind*	VL 1 | How to study vision	https://www.youtube.com/watch?v=9WcIiSCDqhE
Gegenfurtner | *Folge 3* | *Auge*	VL 3 | Human eye and retina	https://www.youtube.com/watch?v=RN_HJHIcg2U&t=7s
Gegenfurtner | *Folge 4* | *Retina*	VL 3 | Human eye and retina	https://www.youtube.com/watch?v=OT3ppDCiOD8&t=9s
Gegenfurtner | *Folge 9* | *Objekte*	VL 7 | Object Recognition I	https://www.youtube.com/watch?v=BAvrpfEFOik&t=4118s
Gegenfurtner | *Folge 10* | *Aufmerksamkeit*	VL 12 | Visual Attention	https://www.youtube.com/watch?v=3wi0yysQsto&t=2073s
Gegenfurtner | *Folge 6* | *Farbe*	VL 14 | Colour Vision I	https://www.youtube.com/watch?v=9ZNVEMc6VN0&t=2217s
Gegenfurtner | *Folge 12* | *Hören*	VL 16 | Auditory Perception I	https://www.youtube.com/watch?v=YxdWk2oPye8&t=1173s

Quizzes … when you can access them and when you need to have them completed

Quiz title	Access from 12:00 hrs on the day of the lecture …	Complete by 23:59 hrs on the evening prior to the lecture …
Q1 Linear Systems	VL 2 | Linear systems, Fourier transform and optics	VL 3 | Human eye and retina
Q2 Human eye and Retina	VL 3 | Human eye and retina	VL 4 | Psychophysics and Experimental Design
Q3 Psychophysical Methods	VL 4 | Psychophysics and Experimental Design	VL 5 | Spatial Vision I
Q4 Spatial Vision	VL 6 | Spatial Vision II	VL 7 | Object Recognition I
Q5 Gestalt Psychology and Perceptual Organisation	VL 8 | Object Recognition II	VL 9 | Object Recognition III
Q6 Object Recognition no. 1	VL 9 | Object Recognition III	VL 10 | Object Recognition IV
Q7 Object Recognition no. 2	VL 10 | Object Recognition IV	VL 11 | Scene Perception
Q8 Scene Perception	VL 11 | Scene Perception	VL 12 | Visual Attention
Q9 Visual Attention	VL 12 | Visual Attention	VL 13 | Visual Saliency
Q10 Visual Saliency	VL 13 | Visual Saliency	VL 14 | Colour Vision I
Q11 Colour Vision	VL 15 | Colour Vision II	VL 16 | Auditory Perception I
Q12 Auditory Perception	VL 17 | Auditory Perception II	Q & A I

Asynchronous MATLAB exercises … and when you need to have them completed

Exercise topic	Complete by 23:59 hrs on the evening prior to the lecture …
Linear systems, convolution, Fourier transform	VL 5 | Spatial Vision I
Receptive fields and neural images	VL 7 | Object Recognition I
Convolutional neural networks and object recognition	VL 11 | Scene Perception

Time and credits

For this course you will obtain 6 ECTS—a workload equivalent of 180 hrs.

What	How long [mins]	How often?	Total time [hrs]
Lectures	100	20	33,5
Asynchronous videos	2–100	11	13,5
Quizzes	90*	12	18
MATLAB exercises	240	3	12
Exam preparation	2160§	1	36
Reading (“normal” lectures)	180	11	33
Reading (inverted classroom lectures)	300	6	30
Total			**176**

*includes preparation time; quizzes typically only take between 5 and 45 minutes to complete … .

§estimated as 20% of total time for the course—generous, me thinks … .

Thank you.

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