Saisie du descriptif des cours

Code du cours :

Thursdays 10 - 12:00

Modalité d'évaluation :

The evaluation consists of an evaluated presentation during the semester (depending on the number of students enrolled, the presentation during the semester will be in groups of students) and on continusous evaluation during the semester.

Objectif : (500 caractères autorisés)

1. Have a general understanding of memory mechanisms at the behavioural and neural level
2. Have a general understanding of neuromodulatory effects of emotion and stress on memory, at the behavioural and neural level
3. Give a lifespan perspective on memory and emotion interactions – how they develop over the lifespan
4. Get familiar with methodology of emotion and memory studies in psychology and neuroscience
5. Learn critical thinking and rigorous approach to psychology and neuroscience research
6. Demonstrate written and oral communication skills through presentations

Descriptif : (2000 caractères autorisés)

This is an interdisciplinary seminar designed both for psychology and neuroscience students. This seminar will be taught in English.

The course combines research from behavioral and physiological studies, psychoneuroendocrinology and pharmacological research, as well as affective, cognitive and developmental neuroscience to elucidate how human memory is modulated by emotion and stress.

During the semester, we will address the following questions: a) what are current models of emotional memory and methods of related research; b) what are the common and distinct influences of stress and emotions on memory; c) what are memory mechanisms and how they are affected by emotions vs. stress; d) how does the interplay between emotion and memory develop throughout the lifespan; e) what is the clinical relevance and possible applications of discussed findings.

The course takes the form of (weekly) 2-hour classes. The meetings will be based on pre-class readings of scientific articles, prepared presentation and discussion sessions.

Bibliographie : (2000 caractères autorisés)

Articles in English from specialized scientific journals will be read for each class.

Topics of journal articles:

1. Introduction – emotion and memory interactions (models and methods)
2. Emotion and memory interactions – basic behavioural and neural findings
3. Memory mechanisms in the brain (encoding, consolidation, retrieval)
4. Affective dimensions vs. basic emotions – influences on memory
5. Emotion and stress - neuromodulatory perspective, pharmacological studies
6. Emotion effects on memory of items
7. Emotion effects on memory for context (space, time)
8. Complex effects of stress vs. emotion on memory

En gras : champs obligatoires

Saisie du descriptif des cours

9. Neurocomputational operations related to memory – emotion effects
10. Memory and emotion interactions across development (focus children)
11. Memory and emotion interactions across development (focus adolescents)
12. Memory and emotion interactions in older adults
13. Emotion & stress effects on memory – clinical relevance and possible applications
14. Influencing emotional effects on memory using emotion regulation
15. Changing emotional memories through reconsolidation

Cours conseillés : (2000 caractères autorisés)

Lien(s) utile(s) : (pages internet uniquement)

Titre en anglais : (240 caractères autorisés)

How emotion affects memory over the lifespan

En gras : champs obligatoires

How emotion affects memory over the lifespan

Ulrike Rimmele, Monika Riegel

Evaluation methods

Geneva, 2022/09/22

Course content

Class 2, Memory mechanisms in the brain (encoding, consolidation, retrieval)	29-Sep
Class 3, Affective dimensions vs. basic emotions – influences on memory	06-Oct
Class 4, Complex effects of stress vs. emotion on memory	13-Oct
Class 5, Emotion effects on memory of items	20-Oct
Class 6, Emotion effects on memory for context (space, time)	27-Oct
Class 7, Emotion and stress - neuromodulatory perspective, pharmacological studies	03-Nov
Class 8, Neurocomputational operations related to memory – emotion effects	17-Nov
Class 9, Memory and emotion interactions across development (focus children/ adolescents)	24-Nov
Class 10, Memory and emotion interactions in older adults	01-Dec
Class 11, Emotion & stress effects on memory – clinical relevance and possible applications	08-Dec
Class 12, Influencing emotional effects on memory using emotion regulation	15-Dec
Class 13, Changing emotional memories through reconsolidation	22-Dec

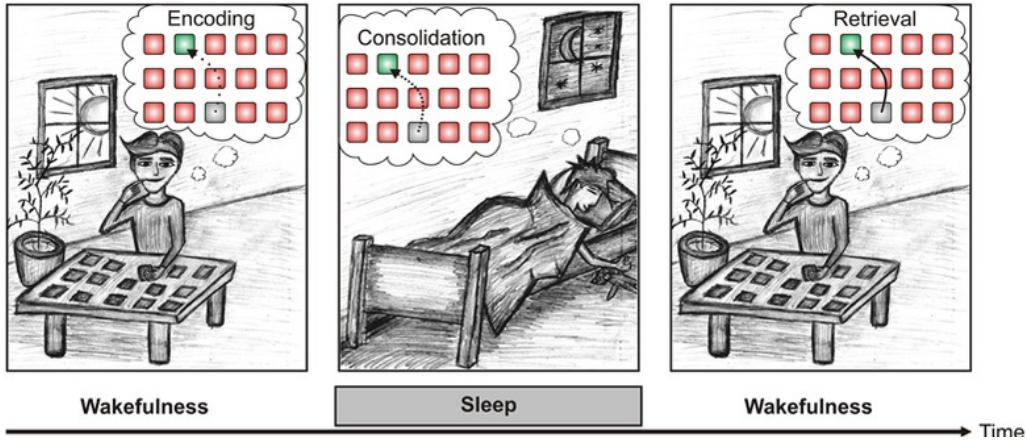
Classes content

Topic teasers

2. Memory mechanisms in the brain (encoding, consolidation, retrieval)

- Discussion moderator: Monika
- Topics: distinguishing memory systems with imaging, subsequent memory paradigm, replay as consolidation mechanisms, role of hippocampus
- Readings:

- Wagner et al. (1998). Building memories: remembering and forgetting of verbal experiences as predicted by brain activity. *Science*
- Schapiro et al. (2008). Human hippocampal replay during rest prioritizes weakly learned information and predicts memory performance. *Nat Comms*



Feld & Diekelmann (2015). *Front. Psych.*

How emotion affects memory over the lifespan

Ulrike Rimmele, Monika Riegel

Evaluation methods

Geneva, 2022/09/22

Course objectives

1. Have a general understanding of memory mechanisms at the behavioural and neural level
2. Have a general understanding of neuromodulatory effects of emotion and stress on memory, at the behavioural and neural level
3. Give a lifespan perspective on memory and emotion interactions & how they develop over the lifespan
4. Get familiar with methodology of emotion and memory studies in psychology and neuroscience
5. Learn critical thinking and rigorous approach to psychology and neuroscience research
6. Demonstrate written and oral communication skills through presentations

Continuous evaluation

The course is meant to be interactive, so it requires your participation!*

minute papers	10%
check-in quizzes	20%
preparing 2-3 questions for discussions	10%
other presentations' evaluation	10%
article presentation	50%

** If a continuous evaluation is not possible due to health issues, we will plan an oral exam in the second session of exams*