

## SOC137: Mnemonics – Memory Training

**THIS COURSE DOES NOT REQUIRE A FINAL EXAM**

# SYLLABUS

**READ THESE INSTRUCTIONS NOW!**

Keep work organized by week, clearly labeled and typed or copy/paste onto your syllabus. Math and hand done projects: photograph, scan or screenshot and copy/paste to your syllabus. Keep images small so your file isn't too large to submit or save work as a PDF. Go to "Student Services" online for any issues with this course. If you need Microsoft Word, request an email from Student Services and follow the steps given to you.

- **SUBMITTING WORK: YOU MUST SUBMIT ALL WEEKS AT ONCE on one file.** Your syllabus may be submitted separately if you chose not to add your work to it. Go to the website and select "Submit Work", complete the form and attach your work. You may also share a public link such as Gdocs. You have two attempts at receiving a passing grade of "C" or better so submit your full effort original work. Do not mail work. You will receive a reply in about 5 business days. Do not call or email asking for us to verify your work. All components of your course must be completed by the end of the 8<sup>th</sup> week from the time of your registration; 12 weeks for a 2 credit class. If you have a medical emergency or disability preventing you from completing your class, contact "Student Services" and send an email to request up to a 2-week extension

**Course SOC137: The Science of Mnemonics - Memory Training:** 'Mnemonic' is another word for memory tool. Mnemonics are methods for remembering information that is otherwise quite difficult to recall. The basic principle of mnemonics is to use as many of the best functions of your brain as possible to store information. The three fundamental principles underlying the use of mnemonics are imagination, association and location. Working together, you can use these principles to generate powerful memory training or mnemonic systems. Memory training is a process of consciously retaining, storing and recalling experiences. Through learning, knowledge is acquired, and through memory this knowledge is made available. Through memory training, creative memory is optimized. This course's purpose is to enhance and train memory for self-improvement.

## INTRO TO Mnemonics

### Mnemonics

#### Memory Training for Enhanced Mental Fitness

Memory training is a process of consciously retaining, storing and recalling experiences. Through learning, knowledge is acquired, and through memory this knowledge is made available. Through memory training, creative memory is optimized for self-improvement

There are different types of memory, temporary or short term, which is stored for a very short period of time in the brain- a millisecond to a few minutes, and permanent or long term. Short term memory can become long term through focused attention, associated ideas, and repetition.

There are also two categories of memory. Declarative memory is what we use to remember facts and events, such as your phone number, or anniversary. Procedural memory is what comes into play for procedures and abilities, such as riding a bicycle, driving a car, or tying your shoes. Muscle memory of dancers and martial artists are of this procedural type. Both types benefit from memory training.

## How To Improve Memory

You already remember things. How do you do that? Your address, your phone or social security number. Think about these. What is it about these things that make them so memorable? Maybe the sheer repetition over time. Perhaps it's a matter of identifying with the information. "This is MY number". Try identifying with whatever it is you need to remember.

Need to remember how a word is spelled? Visualize the word in the upper left portion of your visual field. Lump the letters into several 3 or 4 letter chunks. Repeat the visualization of these chunks several times.

### Special Repetition

There is a hidden time factor to memory training. Repeat a new piece of information several times, then think of anything you have known for years.

What does it feel like to know something for years? Transfer that "feeling" to the "new" piece of information to be remembered. Then repeat this feeling of knowing several times.

Gently and in a relaxed way, synchronize your breathing with the rhythmic repetition of this "new" thing that "you have always known". Surprise yourself with the ease of memory training when you're relaxed and use the appropriate method.

Memory does not release itself into a sharp, never erring instrument instantly, but must be nurtured and trained regularly in order for it to become that next generation retention instrument we all hope for.

### What is Mnemonics?

#### Designing Mnemonics for Memory Training

'Mnemonic' is another word for memory tool. Mnemonics are methods for remembering information that is otherwise quite difficult to recall. A very simple example is the '30 days hath September' rhyme. The basic principle of mnemonics is to use as many of the best functions of your brain as possible to store information.

The three fundamental principles underlying the use of mnemonics are imagination, association and location. Working together, you can use these principles to generate powerful memory training or mnemonic systems.

**Imagination** is what you use to create and strengthen the associations needed to create effective mnemonics. Your imagination is what you use to create mnemonics that are potent for you. The more strongly you imagine and visualize a situation, the more effectively it will stick in your mind for later recall. The imagery you use in your mnemonics can be as violent, vivid, or sensual as you like, as long as it helps you to remember.

**Association** is the method by which you link a thing to be remembered to a way of remembering it. You can create associations by:

- placing things on top of each other
- crashing things together
- merging images together
- wrapping them around each other
- rotating them around each other or having them dancing together
- linking them using the same color, smell, shape, or feeling

As an example, you might link the number 1 with a goldfish by visualizing a 1-shaped spear being used to spear it.

**Location** gives you two things: a coherent context into which you can place information so that it hangs together, and a way of separating one mnemonic from another. By setting one mnemonic in a particular town, I can separate it from a similar mnemonic set in a city. For example, by setting one in the town of Horsham and another similar mnemonic with images of Manhattan, we can separate them with no danger of confusion. You can build the flavors and atmosphere of these places into your mnemonics to strengthen the feeling of location.

## Creative Memory

## **Unleash Your Creative Memory And Deepest Motivations**

**Creative memory** activates all brain areas (thus eliciting cooperation between them becomes easier).

Memory also stores the motivations of our various parts which can be acknowledged and fulfilled. We want to encourage broader perspectives by envisioning new meaning in your life experiences.

Through creative memory, you draw on many inner resources and skills: memories of life experiences, dreams, your imagination. Association involves the generation of ideas, images and experiences from your past that can later be shaped to beneficial ends.

When you understand how your memory works, and when you use simple brain-friendly techniques, you can vastly improve your memory to the point you will never doubt your memory again. Never. Ever.

**In the New Age the Daughters of Memory shall become the Daughters of Inspiration" -- William Blake**

Self-concepts, imagination, dreams and creative memory are all born in childhood. We are engaging this process to accent the empowering influences that accompanied us through life but perhaps haven't matured. We also want to acknowledge those parts of us that stifle our best efforts... those parts that sabotage our greatness. We don't want to confront these aspects per-se, which increases the antagonism within. Actually we want to embrace these parts, lovingly thanking them for looking out for our best interests, and "relieve them of duty".

Like the World War 2 soldier, stranded on some South Pacific island still dutifully carrying out his original mission, not realizing that the war has been over for years, we have aspects within, standing on alert, ready to crush resembling an enemy. The unfortunate thing is that these parts were trained when we were defenseless children and the "enemy" of that time may no longer be a threat. In fact, what these parts guard against might be just what we need to develop now... eloquently talking to strangers, standing before a crowd to deliver a speech, standing up to "authority figures", or expressing what we feel within.

Creative memory allows us to ask these parts what it is they want for us. Sensitive "listening" will render answers. Thank this part for wanting that benefit for you, then offer a more mature method of securing it. Further, find out from the part what it was looking for through seeking the first result. Ask the part, "if you had THAT (intended result) fully and completely, what would that give you which you want even more?" Repeated questioning and listening leads to profound states of fulfillment, all without further alienating aspects of ourselves that have been isolated for too long.

Focus on the most significant aspect of your memory. You might visualize a particular room or the backyard of your house on a summer day when something significant happened to you: a fateful accident, a moment of serious conflict, an unexpected gift, a moment of friendship or intimacy. These are the elements of creative memory.

Childhood provides a treasure house of creative memories... turn your attention to it. Raise up the sunken feelings of this enormous past... your personality will grow stronger... out of this immersion in your own world, healing comes. This adds new meaning to your life.

**LET'S GET STARTED!**

**Week 1**

**Download and Study: Mnemonics at a Glance by Dr. McPherson**

**ASSIGNMENT:** Discuss each mnemonic technique in the text, when it's most useful, disadvantages. Next, try each technique and provide your own personal opinion.

**Add Responses Here**

Read “How Memory Works” by Dr. McPherson

at: <http://www.memory-key.com/memory>

**ASSIGNMENT:** From the link provided above, go to the left menu and study “Memory domains” and “Working memory”. Give you own definition of “Memory”

**Add Responses Here**

**Download and Study: Mnemonic Devices Images Text**

**ASSIGNMENT:**

- 1.) Discuss each lobe of the brain and how it operates in regards to memory
- 2.) Discuss the Limbic System as it relates to memory
- 3.) Discuss the Brainsten as it relates to memory
- 4.) Discuss neurons and neurotransmitters – how they operate.
- 5.) Discuss the components of the brain and its hemisphere

**Add Responses Here**

**LET'S PRACTICE**

**Memory II:** <http://www.memory-improvement-tips.com/pattern-memory.html>

**RESULTS**

- 1.) What was your highest score?

2.) How many attempts did it take you to attain your highest score?

**Add Responses Here**

## **Week 2**

### **Memory Problem**

**Visit and Study:** <http://www.memory-key.com/problems>

**ASSIGNMENT:** Read “Memory Problem” using the link above – be careful to read each page. Discuss in detail five (5) factors/events that have an impact on cognition and memory.

**Add Responses Here**

**ASSIGNMENT:** Of the five factors you have describe, research one in depth. Provide a mini research paper of three pages – double-spaced – size 12 Times New Roman font – giving further information, updated news, and your own feedback on the topic.

**Add Research Essay Here**

### **Download and Read: Worksheet A Exercises**

**ASSIGNMENT:** Complete assignments on the worksheet and place below “Acronym” and “Acrostic”.

**Add Assignment Here**

**Read the Journal Article** <http://www.apa.org/monitor/sep05/workout.aspx>

**ASSIGNMENT:** Discuss the findings in the research journal article. What new knowledge was gained? How is this information useful?

**Add Responses Here**

## **Week 3**

**ONLINE LECTURES – WATCH/REVIEW AND KEEP NOTES**

## How Memory Works - Lecture

<http://www.youtube.com/watch?v=kwo2WxM87-g&feature=fvwrel>

**ASSIGNMENT:** Provide a detailed summary of your notes.

**Add Responses Here**

## The Photographic Memory - Lecture

<http://www.youtube.com/watch?v=Q3XIVm98hml>

**ASSIGNMENT:** Provide a detailed summary of your notes.

**Add Responses Here**

## Feats of Memory

[https://www.ted.com/talks/joshua\\_foer\\_feats\\_of\\_memory\\_anyone\\_can\\_do?language=en](https://www.ted.com/talks/joshua_foer_feats_of_memory_anyone_can_do?language=en)

**ASSIGNMENT:** Now try some of the techniques. Provide a detailed summary of your attempts and outcome.

**Add Responses Here**

## Memory Research – latest news

<http://www.youtube.com/watch?v=4sWnkBf5V7s&feature=related>

**ASSIGNMENT:** Provide a detailed summary of your notes.

**Add Responses Here**

## Week 4

### Visit, Watch, and Read: Olfaction and memory

<http://study.com/academy/lesson/the-sense-of-smell-olfactory-bulb-and-the-nose.html>

and

<https://www.psychologytoday.com/blog/brain-babble/201501/smells-ring-bells-how-smell-triggers-memories-and-emotions>

**ASSIGNMENT:** **PROJECT** – Go to 4 different environments in different locations: Bedroom, Garage, Shopping mall, Grocery Store, Restaurant, Church etc. Take a deep whiff and then reflect. What are your first memories associated with each scent. Share below.

**Add Responses Here**

### Download and Read: Memory Through the Senses

**ASSIGNMENT:** **PROJECT** - Discuss childhood memories embraced by sight, hearing, smell, taste and touch as well as influential historical events.

1. When you think about your childhood what images/scenes come to mind?
2. Which of the things you have touched left the strongest feelings in you?
3. Do you remember any noises, sounds, music, songs that had a strong influence on you?
4. Are there any tastes that you associate with your childhood or your past?
5. Can you think of any smells that you will never forget?
6. Are there any historical events which had an impact on you or somebody close to you?

Take these responses and add photographs using the reading text provided as an example. Share your memory book by placing your pages below this syllabus or by taking photos of your project and sharing each [age]. You may place the images below.

**Add Responses Here**

## WEEK 5

**Download: Memory Activities**

**ASSIGNMENT:** Complete and copy/paste or scan your responses to the activities and place on or below this syllabus Activities 1, 2, 3 & 4

**Add Responses Here**

**ASSIGNMENT:** Project – Develop your own mnemonic device. Give it a name and explain how it works. Give examples.

**Add Responses Here**

### Music and Memory

<http://musicandmemory.org/>

**ASSIGNMENT:** Also scroll and watch the video. Provide a 3-page detailed INFORMATIVE ESSAY on this programs purpose and impact. Include research on Alzheimer’s and dementia. Give details on how this program helps patients. Give opinion on how this program could be expanded. For more videos by this organization go to: <https://www.youtube.com/channel/UCWSW0VyPUvG8dfJc9VtFQRg>

**Add Responses Here**

## WEEK 6

### MNEMONICS LAB - PROJECT

[http://www.sciencebuddies.org/science-fair-projects/project\\_ideas/HumBeh\\_p044.shtml?from=Blog#procedure](http://www.sciencebuddies.org/science-fair-projects/project_ideas/HumBeh_p044.shtml?from=Blog#procedure)

**ASSIGNMENT:** Complete the LAB below. Share your data and all of the information requested below. Type a formal lab report below.

#### Experimental Procedure

1. Develop two lists of words and a corresponding mnemonic for each list.
  - a. Make each list at least seven words long.
  - b. Your lists of words are only limited by your own imagination. You can come up with your own lists of words by taking inspiration from the world around you. For example, come up with a mnemonic that

corresponds to your parents' grocery list. For more examples of lists you could use, look at the bottom of D. Congos' webpage [9 Types of Mnemonics for Better Memory](#).

- c. When trying to come up with a mnemonic for each list of words, you can look at the mnemonic examples given in the [Introduction](#).
  - i. For example, you could come up with an acronym that uses the first letter of each word on the list.
  - ii. Alternatively, you could make a list of words that are descriptive and think of a funny sentence or image that incorporates all of those words.
2. Split your volunteers into two groups; one will be the control group and one will be the experimental group.
3. Clearly write your first list on a sheet or scrap piece of paper. Do *not* include the mnemonic.
4. In a quiet room without distractions, have every member of the control group look at the list of words you just wrote. Explain what the list is and give them 5 minutes to study the list.
  - a. *Note:* If you see that they start to make a mnemonic to memorize the list, tell them not to!
5. After 5 minutes have elapsed, take away the sheet of paper with the list of words. Have the group leave the room and wait for 1 hour. They can watch TV, talk, listen to music, or do homework.
6. After the hour has elapsed, test each member of the control group individually.
  - a. Have one of the control group volunteers come into the room and recite the words from the list or write them on a blank piece of paper.
  - b. Make sure nobody else can hear them or see what they write.
  - c. Use the stopwatch to time how long it takes the volunteer to recall the list and record this in a data table in your lab notebook similar to Table 1, below. Also record in your lab notebook how many words he or she was able to recall correctly.
  - d. Repeat steps 6a–6c for each volunteer of the control group, always recording your data in your lab notebook.
7. Now clearly write your first list on a sheet or scrap piece of paper but this time *do* include the mnemonic (if it is something that can be easily written down).
8. Now show the list of words to the volunteers in the experimental group; this time, along with the mnemonic. Explain the list of words to the group and show how the mnemonic works with the list. Let the group examine the list and the mnemonic for 5 minutes.
9. Then repeat steps 5–6 with the experimental group. Remember to always record your data in your lab notebook.
10. Repeat steps 3–9 using the second list and its corresponding mnemonic. This time, switch which group is the control group and which is the experimental group (in other words, if a person was in the control group before and did not receive the mnemonic for the list, they should now be in the experimental group and receive the mnemonic for the new list). Remember to record all of your data in your lab notebook.
11. Now look at the data that you have collected. Do the following calculations for each mnemonic you tested. Record all of your answers in your lab notebook.
  - a. Calculate the average time that the control group took to recall the list.
    - i. To calculate the average, add together the amount of time that each person in the control group took to recall the list, and then divide that number by the number of people in the control group.
    - ii. For example, if there were three people in the control group and they each took 30 seconds, 25 seconds, and 35 seconds to recall the list, the average time that the control group took would be 30 seconds (since the sum of these numbers divided by three is 30).
  - b. Calculate the average time taken by the experimental group to recall the list.
  - c. Calculate the percentage of words that each volunteer recalled correctly.
    - i. To do this, divide the number of words they recalled correctly by the total number of words on the list.
  - d. Then calculate the average percentage of words recalled correctly for each of the groups.
12. Plot the data you have on two bar graphs.
  - a. The first graph should show the average percentage of words recalled for the control group and the

experimental group for each list used. Label the x-axis List and the y-axis *Average Percent Words Recalled*. (Make the bars for the control group and experimental group different colors.)

- b. The second graph should show the average time taken to recall the list. Label the x-axis *List* and the y-axis *Average Time to Recall List*. Again, for each list, plot the results of both the control group and the experimental group.
- c. If you would like help building your graphs or would like to make them online, try the following website: [Create a Graph](#).

13. Analyze your results. Look at your graphs and try to draw some conclusions.

- a. Is there a difference between the results of the control group and the experimental group?
- b. Based on your results, does it look like using mnemonics helps a person remember a list of words accurately?
- c. Did using mnemonics help with how fast the volunteers were able to recall the list?

Volunteer	Control or Experimental	How long did it take to recall this list?	How many words did the volunteer recall correctly?	Percentage of Words Recalled Correctly

**Table 1.** In your lab notebook, create a data table like this one to record your results in.