Behavioral Neuroscience
Research Capstone
Course Manual

Compulsive-like (left) and non-compulsive like (right) OCD mice

BIOL F440 (3 credits)
University of Alaska Fairbanks
Spring 2020
Abel Bult-Ito
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Part I: Syllabus

1. Catalog Description

*BIOL F440 Behavioral Neuroscience Research Capstone (3 credits)*

Online asynchronous comprehensive biomedical research on compulsive-like mice, including data collection, data analysis, and interpretation of results. Learn about obsessive-compulsive disorder in humans and how animal research has the potential to contribute to improving the human condition. Complete the Biology Capstone requirements including writing a full length scientific paper. (1 + 6)

2. Detailed Description of Behavioral Neuroscience Research Capstone

Welcome to Behavioral Neuroscience Research Capstone, a fully online asynchronous course! During this semester, you will participate in comprehensive biomedical research on mice, including data collection, data analysis, and interpretation of results. You will learn about obsessive-compulsive disorder (OCD) and other conditions in humans and how basic animal research has the potential to contribute to improving the human condition. You will be collecting data on three different behaviors using over 90 videos of individual mice per behavior, and an additional behavior with about 22 videos. In addition, you will complete Biology Capstone requirements, which include the writing of an abstract for lay persons, giving an oral presentation, and writing a full length manuscript according to peer-reviewed journal guidelines.

**The goals of this course are:**
To offer a comprehensive undergraduate biomedical research experience to online students from Alaska, the US, and around the world that is an equivalent experience to students who work in the physical research laboratory. To expose students to the scientific research method with intensive hands-on research activities, and to have students develop scientific writing skills at the level of peer-reviewed scientific journal articles.

**Student learning outcomes. The students will demonstrate:**
1. An understanding of how to handle mice responsibly according to federal law by completing Institutional Animal Care and Use Committee (IACUC) training.
2. An understanding of how research on animals must be scientifically justified, humane and ethical, and provide new knowledge.
3. An ability to collect behavioral data from mouse videos from compulsive-like, non-compulsive-like, and randomly bred mouse strains.
4. A capability to analyze data for each behavior collected for your own datasets for three of the four behaviors.
5. An ability to interpret and discuss results in the context of other published research collected for your own datasets for three of the four behaviors.
6. A competence to describe the key characteristics of obsessive-compulsive disorder (OCD), anxiety, and depression in humans.
7. An ability to compare and contrast compulsive-like, anxiety-like, and depression-like behaviors in mice to equivalent conditions in humans.
8. A capability to formulate original research hypotheses.
9. A competence to describe and discuss how basic research, as performed in this course, contributes to the animal model of OCD and how it may have the potential to contribute to improving the human condition.
10. An ability to give an effective oral presentation about your research.
11. A skill to write an effective abstract for lay persons about your research.
12. A skill to write a high quality scientific research paper using your own datasets.

The OCD mouse model you will be using:
The compulsive-like mouse model was developed from mouse strains artificially selected for high levels of nest-building behavior (compulsive-like big nest-builders; HA1 and HA3), low levels of nest-building behavior (non-compulsive-like small nest-builders; LA1 and LA2), and randomly-bred control mice (CA1 and CA3), with intermediate nest-building levels (Bult and Lynch, 2000). These mice show face, predictive, and construct validity for a compulsive-like phenotype, using behavioral assessments and pharmacological treatments (Greene-Schloesser et al., 2011; Mitra and Bult-Ito, 2017; Mitra et al., 2016, 2017a, 2017b, 2017c; Winter et al., 2018).

References:

We will use a variety of approaches to accomplish the goals and learning outcomes, which are all available on the course online portal:

1. **Content modules (about 12 hours).** We will discuss the format of the course, what you get out of the course, what is expected of you, and the ethics of using mice in research. In addition, we will discuss the background on the four mouse behaviors you will be researching and how these behaviors relate to obsessive-compulsive disorder (OCD), anxiety, and depression in humans.

2. **Laboratory training, data analysis, and data interpretation modules, Institution Animal Care and Use Committee (IACUC) training, and discussion boards (about 10 hours).** In these modules, you will receive detailed information on how the behavioral data of the OCD mice was obtained and how you are to collect your own data set using these behavioral videos, and how to analyze and interpret the data. In addition, you will learn about the ethical use of mice in research and how to handle the animals. You will also be asked to contribute to discussion boards related to the course content.

   **You are required to successfully complete IACUC training during the first two weeks of the course. You will be withdrawn from the course if you have not completed this training by the end of the second week, i.e., by 11:59pm Alaska standard time (AKST) on Friday 24 January 2020.**

3. **Collection of behavioral neuroscience research data (about 75 hours).** For each behavior, 11-16 mice from each of six mouse lines will be individually videotaped. **You will collect your own dataset using all the available videos (over 90) for three out of four behaviors.** For each of three behaviors, you will spend about 20-25 hours to collect and analyze the data and 5-6 hours for one additional behavior. Please be advised that you may be collecting several behavioral components for each behavior. This course is individualized to meet your needs and the research experiences you want to have. You get to choose the three behaviors from a set of four behaviors/experiments, including marble burying behavior, open field, tail suspension test, and the elevated zero maze. Please realize that collecting data in this format is very intensive, at a very high scientific level, and one of the most challenging laboratory exercises you have ever done. Take frequent short breaks so you can stay focused. You will have to submit all data (of over 90 mice for the three behaviors you choose) by the due date for each data submission module. Therefore, I suggest you work ahead with the previous modules so you have enough time to finish the data collection.

4. **Write a scientific research paper describing your results and doing a thorough peer-reviewed literature review to put your research results in the appropriate scientific context (about 45 hours).** This paper will follow the format of a peer-
reviewed neuroscience journal of your choice.

This manual will act as your guide for this course. In it is a description of the course requirements, module topics, and reading assignments, as well as general information to help you get the most out of this course. You should refer to it regularly throughout the semester.

Your minimal responsibilities for this course are defined in the Course Requirements section below. Be aware, however, that your successful completion of the course activities depends on how well you integrate all of the different kinds of information you receive from content modules, trainings, reading assignments, and data collection, analysis, and interpretation activities. Therefore, do not think of those assignments as separate entities but rather as parts of a jigsaw puzzle; together the complete concepts emerge.

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Office hours: T and Th 1:30-2:30pm, or by appointment for in-person or online chat, or by email during work hours (M-F 8am through 5pm)

Course meeting times and locations
Content modules, laboratory trainings, and data sets will be available online. Generally, these are available when you complete the previous module. The analysis modules (5, 8, 12, and 15) will be made available on Monday by 1pm Alaska standard time (AKST) as I will need to compile all students' data so you can analyze them. Activities and assignments each week need to be completed by Friday 11:59pm (23:59) AKST.

Course section
BIOL F440; UX1; CRN 36429;

Prerequisites and course fees
Junior or senior undergraduate standing, or permission by instructor. Special fees ($200 research fee) and regular fees ($25 eCampus Fee per credit, Network Fee of 4% of tuition, Technology Fee of $5 per credit, and Facility Fee of $6 per credit) apply.
Canvas network site
Go to https://canvas.instructure.com/enroll/1718058,
Or go to https://canvas.instructure.com/register and use the join code: 1718058,
Or go to https://canvas.instructure.com/courses/1718058 and click the “+ Join this Course” button on the top right of the screen.

Minimum skills and technology requirements
This is an online course. Students are expected to be active participants in online exchanges with their cohort. Additionally, there will be periodic online interaction with the instructor. Students will use a computer to communicate, to access online multimedia (audio, video), and to create multimedia. Consistent high speed internet access is required.

Students are expected to have the most current versions of several applications that will be used in this course, including Google Chrome, Microsoft Word, Microsoft Excel, and their computer’s operating system. Students must also be comfortable navigating the internet.

Student protections and services statement
Every qualified student is welcome in my course. As needed, I am happy to work with you, disability services, veterans’ services, rural student services, etc. to find reasonable accommodations. Students at UAF are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: www.uaf.edu/handbook/.

Disabilities services
The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. We will closely work with the Office of Disabilities Services (208 Whitaker Building, 474-5655 or TTY at 474-1827; email: uaf-disabilityservices@alaska.edu) to provide reasonable accommodation to students with disabilities.

To ensure that everyone has equal opportunities to succeed in this course, please let me know if I need to accommodate any disabilities that you may have with assistance of Disability Services. Any information you provide will be held strictly confidential.

Support services
The Division of Student Services provides student-centered programs and services designed to assist students in achieving their personal, academic and career goals. In collaboration with the academic deans, we lead the university in recruiting a diverse student body. With the use of ongoing assessment, we support and develop programs
and communities that contribute to the retention, success and leadership development of students. Go to http://www.uaf.edu/sss/ to learn more.

UAF eCampus provides student service support for this online course. See their website at: https://ecampus.uaf.edu.

Writing support services are available to UAF students through the Writing Center, located in 801 Gruening, 474-5314, online at: http://www.alaska.edu/english/writing-center/. You are encouraged to use this resource to meet writing expectations.

Technology support services are available through the OIT Support Center, 450-8300 (Toll Free: 800-478-8226), online at: http://www.alaska.edu/oit/sc/about/contact.xml, and via email to helpdesk@alaska.edu.

The Biology and Wildlife Learning Lab is now available. Teaching Assistants will be available to answer questions and provide guidance. You can also use the space in Murie 202 to do homework, work on projects, do your online course work, etc. The schedule can be found at: https://www.bw.uaf.edu/resources/learning_lab.php.

**A note on sexual misconduct**

UAF is committed to fostering a safe, productive learning environment. Title IX and UAF policy prohibits discrimination on the basis of sex. Sexual misconduct, including harassment, domestic and dating violence, sexual assault, and stalking, is also prohibited at UAF. UAF encourages anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and UAF can respond appropriately.

If you wish to speak confidentially about an incident of sexual misconduct, want more information about filing a report, or have questions about UAF policies and procedures, please contact our Title IX Coordinator, which can be found on UAF’s website.

UAF is legally obligated to investigate reports of sexual misconduct, and therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the extent possible.

As a teacher, I am also required by UAF to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident.

**Accessibility and privacy**

Details on the accessibility and privacy statements for technologies used in this course can be found at:

Canvas: [Accessibility Information](#) and [Privacy Policy](#)

Google: [Accessibility Information](#) and [Privacy Policy](#)

YouTube: [Accessibility Information](#) and [Privacy Policy](#)
3. Course Requirements
To do well in this course you must watch and participate in all course activities. Your grade will be based on the following criteria:

1. Assignments 15%
   a. Content Modules (7.5%)
   b. Laboratory Training Modules (7.5%)
2. Data Collection and Analysis 35%
   a. Collect Data (20%)
   b. Analyze Data (15%)
3. Discussion 15%
   a. Discussion Boards (10%)
   b. Data Interpretation (5%)
4. Biology Capstone Requirements 35%
   a. Abstract for Lay Persons (5%)
   b. Oral Presentation (10%)
   c. Full-Length Science Paper (20%)

Total: 100%

Content modules (7.5%)
Whether you watch the content modules will be monitored by the Canvas Network course management system and evaluated with short online quizzes. You cannot move forward to the next module without watching the video in its entirety and completing the quizzes for each content module correctly. You have to answer all quiz questions correctly to receive credit for the module (you can retake the quiz as many times as necessary).

Laboratory training modules (7.5%)
Whether you watch the laboratory and training modules will be monitored by the Canvas Network course management system and evaluated with short online quizzes. You cannot move forward to the next module without watching each of the assigned mouse videos and uploading the data in the appropriate spreadsheet. You have to answer all quiz questions correctly to receive credit for the module (you can retake the quiz as many times as necessary).

Data collection (20%) and analysis (15%) modules
Because this is a laboratory course, data collection and analysis comprises 35% of your final grade. Whether you watch the mouse videos will be monitored by the Canvas network course management system. You cannot move forward to the next module without watching each of the assigned mouse videos and uploading the data in the appropriate spreadsheet.

For three of the four behaviors, you will collect data of all animals from the six mouse strains (about 90 mice each; all four groups of mice). For one behavior, you will collect data of about 22 animals randomly distributed among the six mouse strains. For some
behaviors you will collect data on several different behavioral components. To get credit for data collection for each behavior, all your data points need to be within an acceptable range, which will be defined for each behavior. This group of about 22 animals represents one group of mice out of four groups of mice. Students will be assigned to one group of mice proportionally distributed across the four groups of mice.

For data analysis, you will use your own dataset for the three of four behaviors for which you collected data from all animals. For the one behavior from just one mouse group, you will use the class dataset and calculate average behavioral scores for each animal and subsequently calculate average scores for each mouse strain. You will then visualize the data in bar graph or line graph figures with appropriate figure legends.

**Participate on discussion boards (10%)**
Your active participation in this course is expected. For each behavior, we will have at least one discussion board to which you are expected to contribute constructively by posting your comments and responding to at least two posts by other students. Constructive feedback means that you answer the questions and comment on other students’ posts in a professional and respectful manner, you use the content provided as a starting point of your discussion, you use the scientific method and review additional content if appropriate, and your comments are relevant to the topic being discussed. I will read each comment and provide you feedback on Canvas. You will have a chance to add to your comments to improve your performance and receive full credit.

**Data interpretation modules (5%)**
Whether you watch the data interpretation modules will be monitored by the Canvas Network course management system and evaluated with short online quizzes. You cannot move forward to the next module without watching the video in its entirety and completing the quizzes for each data interpretation session module correctly. You have to answer all quiz questions correctly to receive credit for the module (you can retake the quiz as many times as necessary).

**Complete the course evaluation for BIOL F440 (UAF Blue)**
Receiving your feedback on the course is very important for improving the course for future offerings. Your feedback will be anonymous and only provided to the instructor after the grades have been posted.

**Complete the Biology Capstone requirements (35% of final grade)**
*Please enroll in BIOL F400 Capstone Project (CRN 33364).*
Enrollment in BIOL F400 Capstone Project is required.

**Receive Capstone Credit for BIOL F440**
To earn the Biological Sciences Capstone Project credit for this course, you need to earn a passing grade (C-) on the abstract for lay persons, earn a passing grade (C-) on the final scientific research paper, earn a passing grade (C-) on your oral presentation, **AND** earn a passing grade (C-) for the course as a whole. Please review the capstone information at [https://www.bw.uaf.edu/undergraduates/capstone_biology.php?p=forms](https://www.bw.uaf.edu/undergraduates/capstone_biology.php?p=forms).
Write an abstract for lay persons (5% of final grade)
Write an abstract that describes your work and is understandable for lay persons who have no specific scientific knowledge.

Give an oral presentation of your work (10% of final grade)
You are required to prepare a 12-15 minute oral presentation of your capstone project. As this is an online class, you are asked to do a screen cast in which you show PowerPoint slides with a small window of you presenting your work. Free software to do screen casts can be found at https://screencast-o-matic.com/. The oral presentation will be graded on effectiveness of description of the objectives of the presentation, effectiveness of description of the rationale for your project, effectiveness of description of methods and results, effectiveness of interpretation of results, quality of original conclusions, synthesis, and recommendations for future research, and effectiveness of presentation, including slides, tone of voice, presentation style, etc.

Write a scientific research paper (20% of final grade)
You are required to read many of the peer-reviewed articles listed in the Canvas course modules and include them in your scientific research paper where appropriate. You are also expected to do additional literature searches to bring your paper to the highest scientific level possible. The paper should include a 200-word abstract and introduction, material and methods, results, and discussion sections, to a minimum length of 15 pages double spaced with 1 inch borders, and font size of 11 or 12, using Arial or Times fonts. The references cited section is in addition to this page minimum and should contain at least 30 peer-reviewed articles.

- The first draft of your paper is due on 30 March 2020 (5% of final grade). You will receive detailed feedback about content and organization. These are the most important components of your paper grade (80%), although I will also pay attention to tone, word choice, sentence structure, grammar, punctuation, and spelling (20%). I will also meet with you in person if you prefer to discuss your first draft and how to improve it.
- Your final paper is due 27 April 2020 (15% of final grade) and will be graded as described for the first draft.

The scientific research paper should have the following components:

- Title page (5%)
  - Includes title, author, course information, and affiliation information.

- Abstract (5%).
  - No more than 250 words.
  - Usually it includes 2-3 sentences of background, 2-3 sentences of methods, 3-4 sentences of results, and 2-3 sentences of discussion/conclusion/interpretation.

- Introduction (20%).
  - The background information, including OCD and comorbidities.
  - Describe the Bult-Ito mouse model.
Briefly describe what you studied in this paper and what hypotheses you want to test, questions you want to answer, or objectives you want to accomplish.

- **Methods (20%).**
  - Describe the animals used and IACUC approvals obtained.
  - Describe how the behaviors were measured.
  - Describe what experimental manipulations were done if applicable.
  - Describe the statistical analysis.

- **Results (20%).**
  - Describe the results in writing and include appropriate statistical results.
  - Illustrate the results with figures and/or tables.
  - Use a similar format as used in the methods section.

- **Discussion (20%).**
  - Compare your findings with already published work.
  - Describe how your findings relate to and contribute to the understanding of the OCD model.
  - Describe how your results compare to other animal models and the OCD condition in humans.
  - Describe how you interpret your results in the context of what is known in the research field.
  - Include a concluding paragraph at the end in which you summarize the discussion and present one or two key interpretations.

- **Acknowledgments (5%),** in which you thank those who have contributed to the work and list those who have funded the research.

- **References (5%).**
  - Include full citations of all peer-reviewed articles you have cited in the text of the paper.
  - Do not include articles you did not cite in the text of the paper.

**Additional Activities**

**Instructor Response Time**
I will respond to direct communication within 24 hours during work days whenever possible. If for some reason I do not respond, I may have missed your message. Please email me again if I do not respond within 48 hours.

I will complete and return feedback and grades for your homework and assignments within seven days whenever possible.

**Late and Incomplete Work Policy**
Late submission of assignments will result in a loss of one point per assignment. Incomplete assignments can be made up until the last day of instruction, i.e., by 5pm AKST on 27 April 2020. Loss of points due to late submission cannot be made up.
Required and Optional Work
You are required to read the materials in each (sub)module, watch each video in each (sub)module, complete each quiz with all questions answered correctly, submit the data for all animals in your group, contribute to each discussion board by posting your answers to all questions and responding to other students' posts, i.e., respond to at least two posts by other students.

The peer-reviewed readings are optional, but you are expected to read the peer-reviewed articles you use for your scientific research paper.

Grading
The class will be graded on a straight percentage basis:

- 97.0-100% is an A+
- 93.0-96.9% is an A
- 90.0-92.9% is an A-
- 87.0-89.9% is a B+
- 83.0-86.9% is a B
- 80.0-82.9% is a B-
- 77.0-79.9 is a C+
- 73.0-76.9 is a C
- 70.0-72.9% is a C-
- 60.0-69.9% is a D
- < 60% is an F

I will not grade on a curve. Be aware that the grading scale above will be used without exception. Therefore, for example 89.9% will result in a final grade of B+ and 59.9% will result in a final grade of F. The 0.1% difference may seem like a small difference, but since it is based on four separate grades with many individual components, it truly reflects a level of performance that does not warrant a higher grade. Being on the right side of the cut-off is your responsibility!

Explanation of NB, C, W, and incomplete grades
This course adheres to the UAF guidelines regarding the granting of “NB” Grades: The NB grade is for use only in situations in which the instructor has No Basis upon which to assign a grade. In general, the NB grade will not be granted.

A “C” (including C+ and C-) grade indicates a satisfactory level of acquired knowledge and performance in completion of course requirements.

A “W” grade indicates withdrawal from the course after the first two weeks of the semester. The instructor may withdraw a student for the course when the student does not participate significantly in the course.

Your instructor follows the UAF Incomplete Grade Policy: The letter “I N” (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student’s control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an “I N” grade.
Information about last date to drop, last day for full tuition and fees refund, and last date to withdraw from the course can be found on the UAF academic calendar at https://catalog.uaf.edu/calendar/.

A note on BIOL F140 Introduction to Behavioral Neuroscience Research
If you completed BIOL F140, in this course (BIOL F440) you will have to collect data on all four groups of mice for all four behaviors, instead of all four groups of mice in three of four behaviors. This will ensure that you will do the same amount of original work in this course when you reuse some of the data you already collected in BIOL F140.

After taking this course (BIOL F440), you will not be allowed to take BIOL F140 as you would be able to reuse the data you collected in BIOL F440.
### 4. Outline of Content Modules, Laboratory Trainings, and Data Collections

(Subject to Change)

<table>
<thead>
<tr>
<th>Week of the semester</th>
<th>Content Modules/Laboratory Trainings: Topics</th>
<th>Data Collections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 13-17 Jan</td>
<td>Module 0: Format of the course; student expectations</td>
<td>-</td>
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<td></td>
<td>Module 1: IACUC Training</td>
<td>-</td>
</tr>
<tr>
<td>2 – 20-24 Jan</td>
<td>Module 1: IACUC Training</td>
<td>-</td>
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<tr>
<td></td>
<td>Module 2: The ethics of using mice in research</td>
<td>-</td>
</tr>
<tr>
<td>3 – 27-31 Jan</td>
<td>Module 3: Scientific background on OCD in humans and compulsive-like behavior in mice; nest-building data presentation</td>
<td>-</td>
</tr>
<tr>
<td>4 – 3-7 Feb</td>
<td>Module 4: Laboratory training session 1: Marble burying test (compulsive-like behavior) and Data collection 1</td>
<td>Marble burying test</td>
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<tr>
<td>5 – 10-14 Feb</td>
<td>Module 5: Data analysis session 1: Marble burying behavior</td>
<td>-</td>
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<tr>
<td>6 – 17-21 Feb</td>
<td>Module 6: Scientific background on anxiety behaviors in humans and mice</td>
<td>-</td>
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<tr>
<td>7 – 24-28 Feb</td>
<td>Module 7: Laboratory training session 2: Open field test (anxiety) and Data collection 2</td>
<td>Open field test</td>
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<td>8 – 2-6 Mar</td>
<td>Module 8: Data analysis session 2: Open field behavior</td>
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<td>9 – 9-13 Mar</td>
<td><strong>Spring Break</strong></td>
<td>-</td>
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<tr>
<td>10–16-20 Mar</td>
<td>Module 9: Scientific background on depression behaviors in humans and mice</td>
<td>-</td>
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<tr>
<td>11–23-27 Mar</td>
<td>Module 11: Laboratory training 3: Tail Suspension test (depression) and Data collection 3</td>
<td>Tail suspension test</td>
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<td>12 – 30 Mar – 3 Apr</td>
<td>Module 12: Data analysis session 3: Tail suspension behavior</td>
<td>-</td>
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<tr>
<td>13 – 6-10 Apr</td>
<td>Module 13: Scientific background on anxiety behaviors in humans and mice</td>
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<tr>
<td>14–13-17 Apr</td>
<td>Module 14: Laboratory training 4: Elevated zero maze test (anxiety) and Data collection 4</td>
<td>Elevated zero maze test</td>
</tr>
<tr>
<td>15–20-24 Apr</td>
<td>Module 15: Data analysis session 4: Elevated zero maze</td>
<td>-</td>
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<tr>
<td>16 – 27 Apr - 1 May</td>
<td>Module 16:</td>
<td>Provide course feedback to improve future courses on behavioral neuroscience</td>
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<tr>
<td></td>
<td>• Interpretation of data session 1: Compulsive-like behaviors in the OCD mice</td>
<td></td>
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<tr>
<td></td>
<td>• Interpretation of data session 2: Anxiety-like and depression-like behaviors in OCD mice</td>
<td></td>
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<tr>
<td></td>
<td>• Interpretation of data session 3: How does it all fit together</td>
<td></td>
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</tbody>
</table>

### 5. How to Get the Most Out of the Course
1. On average, you need to spend at least 9-10 hours per week on this course to be successful. Some weeks, you may only spend 3-5 hours on course activities, while other weeks this may be 20-25 hours, especially for data collection.

2. Do the assigned readings before watching the content modules. This will help you understand the module content material and see how a topic is going to be developed. Watching the content module prepared will also give you the necessary background to enjoy and absorb the content.

3. Establish a schedule of activities that includes some time set-aside for review. For example, as we discuss the results of the open field test, review the data analysis and interpretation of the marble-burying test, so you can put the new information into the proper context.

4. Don't be embarrassed or afraid to admit that you are having difficulty. We should all work together to see that everyone learns. Please contact me because I want this course to be a successful learning experience for everyone. I have office hours because I want to help you succeed; use me!

5. Ask questions. This is the best way you have for clearing up confusing points and misunderstandings and to go beyond what we talked about in content and laboratory modules. Learning to ask questions is the first skill that a scientist has to develop in order to find meaningful answers.

6. Have fun! Nothing works better than enjoying what you are doing. Please let me know at any time what I can do to improve the course.

6. **Students' Rights and Responsibilities**

The university subscribes to principles of due process and fair hearings as specified in the "Joint Statement on Rights and Freedoms of Students." This document can be found in the Division of Student Services. You are encouraged to read it carefully.

Most students adjust easily to the privileges and responsibilities of university citizenship. The university attempts to provide counsel for those who find the adjustment more difficult. UAF may terminate enrollment or take other necessary and appropriate action in cases where a student is unable or unwilling to assume the social responsibilities of citizenship in the university community.

**STUDENT CODE OF CONDUCT**

UAF students are subject to the Student Code of Conduct. In accordance with board of regents' policy 09.02.01, UAF will maintain an academic environment in which freedom to teach, conduct research, learn and administer the university is protected. Students will benefit from this environment by accepting responsibility for their role in the
The principles of the student code are designed to encourage communication, foster academic integrity and defend freedoms of inquiry, discussion and expression across the university community.

UAF requires students to conduct themselves honestly and responsibly, and to respect the rights of others. Conduct that unreasonably interferes with the learning environment or violates the rights of others is prohibited. Students and student organizations are responsible for ensuring that they and their guests comply with the code while on property owned or controlled by the university or at activities authorized by the university.

The university may initiate disciplinary action and impose disciplinary sanctions against any student or student organization found responsible for committing, attempting to commit or intentionally assisting in the commission of any of the following prohibited forms of conduct:

a. Cheating, plagiarism or other forms of academic dishonesty
b. Forging, falsification, alteration or misuse of documents, funds or property
c. Damage or destruction of property
d. Theft of property or services
e. Harassment
f. Endangerment, assault or infliction of physical harm
g. Disruptive or obstructive actions
h. Misuse of firearms, explosives, weapons, dangerous devices or dangerous chemicals
i. Failure to comply with university directives
j. Misuse of alcohol or other intoxicants or drugs
k. Violation of published university policies, regulations, rules or procedures
l. Any other actions that result in unreasonable interference with the learning environment or the rights of others.

This list is not intended to define prohibited conduct in exhaustive terms, but rather offers examples as guidelines for acceptable and unacceptable behavior.

Honesty is a primary responsibility of you and every other UAF student. The following are common guidelines regarding academic integrity:

1. Students will not collaborate on any quizzes, in-class exams, or take-home exams that contribute to their grade in a course, unless the course instructor grants permission. Only those materials permitted by the instructor may be used to assist in quizzes and examinations.
2. Students will not represent the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses, and other reports.
3. No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors.
Alleged violations of the Code of Conduct will be reviewed in accordance with procedures specified in regents' policy, university regulations and UAF rules and procedures. For additional information and details about the Student Code of Conduct, contact the dean of students or visit www.alaska.edu/bor/.

**STUDENT BEHAVIORAL STANDARDS**
Education at the university is conceived as training for citizenship as well as for personal self-improvement and development. Generally, UAF behavioral regulations are designed to help you work efficiently in courses and live responsibly in the campus environment. They are not designed to ignore your individuality but rather to encourage you to exercise self-discipline and accept your social responsibility. These regulations, in most instances, were developed jointly by staff and students. Contact the dean of students for more information.

7. Netiquette

We are mutually interdependent in the success of our learning endeavor. I expect that we will all model the highest standards of respect and consideration for one another and for our learning process.

Please make sure that:

- Your contributions are regular and sufficiently engaging.
- Your contributions are insightful with deliberate contemplation evident.
- You contribute meaningfully to the discussion, and your comments demonstrate original thought and stimulate continued dialog.
- Your feedback is constructive and collegial.
- Your comments are widely distributed across the cohort.
- Your communications exhibit professionalism and respect.

Netiquette addresses civility and professionalism in online communications. Adhering to some basic guidelines further ensures the success of our communications and collective learning experience. Please:

- Do not use offensive language.
- Do not dominate discussions.
- Use simple English.
- Use correct spelling and grammar.
- Share tips with other students.
- Keep an “open-mind” and be willing to express even your minority opinion.
- Think before you push the “Send” button.
- Do not hesitate to ask for feedback.
- When in doubt, always check with others for clarification.
8. Conditions You Agree to When Taking This Course

1. You agree to meet with me in person or by Skype during the first week of class to go over the requirements of this course. You also agree to meet with me individually to discuss your progress in the class at other times during the semester.
2. You agree that you will not make any course materials, including but not limited to content modules, data, data videos, etc., available to anyone else.
3. You agree that you do not object to the use of the OCD mice in the experiments performed in this course.
4. Data collected in this course may be used for publication. Your name may appear in the acknowledgement section of the manuscript to recognize your contribution to the dataset.
5. You will be required to successfully complete online institutional animal care and use committee (IACUC) training before you are given access to the behavioral data videos. You will be withdrawn from the course if you have not completed this training by the end of the second week, i.e., by 11:59pm on Friday 24 January 2020 Alaska standard time.
6. All required activities are entirely your own work.

9. Additional Information

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: alaska.edu/nondiscrimination.

Effective communication: Students who have difficulty with oral presentations and/or writing are strongly encouraged to get help from the UAF Department of Communications and Journalism’s Speaking Center (907-474-5470, speak@uaf.edu) and the UAF English Department’s Writing center (907-474-5314, greening 8th floor), and/or CTC’s Learning Center (907-455-2860, 604 Barnette St.).