Spring 2007
IPRO 306 Project Plan

Enhancing Psychology Research Through Advanced Communications Technology

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Kevin Franke
Krystin Hernandez
Alice Jacob
Chris Jones
Chelsea Miller
Vlad Vilenchik
Stephanie Walter

1.0. Objectives

The purpose of the research done in the IPRO 306 Mood Research Lab is to contribute to the body of knowledge regarding the patterns and accuracy of retrospective recall of affect in persons with Major Depressive Disorder. This will be accomplished by using Personal Digital Assistants (PDAs) equipped with a standardized mood inventory to measure the recall accuracy in volunteers from the non-hospitalized, clinically depressed population and comparing it to that of volunteers from the healthy population.

This project began in fall of 2006 and by the beginning of the spring 2007 term, the team had already collected nearly one-quarter of the total data for the study. The specific objective of IPRO 306, then, is to continue to gather data until a total of twenty-six depressed volunteers and twenty-six healthy volunteers have provided a week's worth of mood reports accompanied by a single retrospective mood report. The team expects to reach this milestone by the end of the term, and have made it their goal to accomplish this task as quickly as possible while still maintaining their high standards of quality and efficiency.

Once all the data has been collected, the other objective of the team is to carefully organize and enter the data into the analysis software program Statistical Package for the Social Sciences (SPSS). From there, they will begin to analyze the results with the goal of arriving at a meaningful conclusion about the accuracy of retrospective recall of affect in the clinically depressed.

2.0. Background

This project was conceived when several students, with the help of faculty advisors from the Department of Psychology, recognized a lack of empirical data regarding the accuracy of retrospective recall of mood in the clinically depressed population. In other words, researchers have not yet studied how accurately a person with Major Depressive Disorder can remember and report their past moods. This lack of research is problematic because clinicians rely almost entirely on the ability of their patients to report on how they have been feeling. If clinicians make diagnostic or treatment decisions based on inaccurate reports, these decisions themselves may very well also be inaccurate.

Research into mood through self-reports have shown there are two dominant mood factors: Positive Affect (PA) and Negative Affect (NA) (Watson, Weise, Vaidya & Tellegen, 1999). Watson, Clark, and Tellegen (1988) defined Positive Affect as states of excitement, attention, enthusiasm, pride, determination and strength; and negative affect as generally subjective feeling of distress including moods states such as anger, contempt, disgust, guilt fear and nervousness. Furthermore, these researchers developed the Positive and Negative Affect Schedule (PANAS), a reliable and valid method of measuring a person's PA and NA through self-reports.

In fall 2006, IPRO 306 obtained fifteen PALM Personal Digital Assistants (PDAs) and equipped them with a software program called Experience Sampling Program (ESP). This well-researched, open-source software allows the user to program a set period of time where the PDA will alert the user with a beep and prompt them to take a survey. The Mood Research Team programmed the PANAS into the software and set the trial time for one week, with the PDA set to beep eight times during the hours of 9:00AM and 10:00PM during the week. This use of PDAs to obtain on-the-spot mood reports is a technique called the Experience Sampling Method (ESM), which is currently one of the most reliable and valid methods of studying mood states (Scollon et al., 2003).

Last term, the team formed the Mood Research Lab and began the study, obtaining full data sets for twelve of the total goal of fifty participants by the end of the term. While much was accomplished, the team still faces many challenges in continuing the project; the most important of which is to establish a solid, comprehensive set of procedures for each member to follow in the lab. This must be done not only to ensure the smoothest operation and quickest, most efficient means to reach the total goal of fifty participants, but also to standardize the research methods to ensure the most reliable data. In addition to performing the research objectives, the team is also invested in completing all of the IPRO deliverables on time and in accordance with the

The end result of this research done by the IPRO 306 Mood Research Lab is not a tangible product or service, but rather, a set of data providing scientifically procured evidence for certain memory patterns (or lack thereof) in the clinically depressed. As such, there are no customers financially invested in the project or awaiting a finished product. However, when the data has been completely analyzed and a conclusion has been reached, the study will be submitted to a peer review in the scientific community to assess the soundness and validity of the methods and conclusion; if it is approved, the study can be published and contribute to the body of literature used by clinicians to better understand the disorder they treat on a regular basis.

Because this study involves human participants, it is necessary to follow all the ethical guidelines set by the Institutional Review Board. For this reason, all members on the team have completed the "Human Participants Protection Education for Research Teams" online course and are eligible to participate as research assistants in a study involving human participants.

3.0. Methodology/Brainstorm/Work Breakdown Structure

The IPRO team must obtain, organize, enter, and analyze the remaining data for the project; specifically, the team needs twenty-one complete depressed volunteer data sets and nineteen complete healthy volunteer data sets.

In order to meet these needs in a timely and efficient manner, the team has established a very organized, specific set of procedures. A brief description of all the major steps involved is given below.

Recruitment

The recruitment sub-team leaders will provide the entire team with locations to advertise for the study. The locations must be equally distributed throughout the Chicagoland area in order to ensure random sampling of the population. There are two separate ads; one seeking healthy volunteers and the other seeking depressed volunteers.

Receiving and Recording Phone Messages

If advertisement has been effective, then the voicemail box in the Mood Research Lab should receive a steady flow of phone messages from people interested in participating in the study. The team will record on the master list every person who has called in response to an advertisement, which includes name, phone number, which ad they are responding to, and the time most convenient to be reached.

Screening/Scheduling Phone Calls

Each potential participant is filtered through two screening processes before they are accepted. The first is performed over the phone by one of the team members. During this phone call, the RA must ensure that the person meets basic eligibility requirements. All volunteers must be between the ages of 18 and 65. Healthy volunteers must have not had any symptoms of psychological disorders within the last five years, while depressed volunteers must currently meet requirements for clinical depression and no other abnormal psychological symptoms. If these criteria are met, the RA may schedule an appointment for the participant to come in to the IPRO office and potentially begin the study.

Make Reminder Phone Calls

Each RA must make sure to call any participants who are scheduled for the next day and remind them of their visit. This is an important step because no-shows are common and severely slow down the progress of the study.

Participant's First-Visit

When a participant comes in for their first visit, the RA is in charge of administering the preparatory paperwork to the participant. This includes: the consent form for the study, the Beck Depression Inventory-II (BDI-II; Beck, 1996), the short-scale Eysenck Personality Questionnaire- Revised (EPQ-R; Eysenck; 1985), a demographic sheet, and a PDA checkout sheet. The participant must be provided with a mental health contact sheet and a copy of their signed consent form. Once these have

been completed, the RA notifies the clinically trained principle investigator, Dror Ben-Ze'ev, who then administers a Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research Version, Non-patient Edition. (SCID-I/NP; First et al., 2002).

If the participant shows no symptoms of psychological disorders (other than depression for depressed volunteers), then they may be included in the study. They will be instructed on how to answer the mood questionnaires and how to properly use the PDA. The ESM trial will begin at this point in the office, where they will fill out the first questionnaire in their week-long trial. Finally, their return visit will be scheduled and the visit will be complete.

Make 48-Hour Calls

Each RA must also make sure to call any participants who have been accepted into the study and are currently in possession of the PDA during their trial. These phone calls must be made 48 hours after the first visit. The RA should make sure that the participant's PDA is functioning properly and that the participant is filling out questionnaires appropriately.

Lab Maintenance and PDA Troubleshooting

Each RA is responsible for settling any unique situations or conflicts that arise with participants who have left messages, have been scheduled, or have started the study. These can include a range of situations: participants who are difficult to reach, participants who miss appointments, schedule conflicts, etc.

Furthermore, each RA is responsible for immediately identifying any PDA malfunctions that may occur and solving them as quickly as possible. Such problems may be uncontrollable (such as a malfunctioning speaker or a faulty battery), may result from an RA error (such as a clock that has been set incorrectly), or may arise when a participant tampers with the hardware or software. Regardless, any malfunction jeopardizes the validity and usability of the data and must be immediately addressed.

Return Visit

When a participant comes in for their second visit, they will return their PDA. While Dror Ben-Ze'ev administers the retrospective mood survey, the RA will take the PDA used during the week and transfer its data onto the laboratory computer, carefully saving the document as the participant's unique code number (e.g. 107.txt). When the retrospective survey is complete, that data is also transferred to the computer and saved as the participant's code number followed by an underscore and the number two (e.g. 107_2.txt). These data sets are then emailed to Dror Ben-Ze'ev and then transferred to the lab USB drive as a third backup.

Each of these major steps in the study have been very well planned out and taught to each member of the team. Please see the two documents included in the delivered project plan: "Appendix #1_Lab Flow Chart.pdf," which provides a general overview of the steps involved in each laboratory task, and "Appendix #2_Lab Procedures and Documents.pdf," which outlines all the duties and paperwork that are used in the lab. Both of these documents were given to each of the team members in order to ensure the greatest level of team preparation.

The effectiveness of these methods will be evaluated on a constant basis. Stephanie, the lab manager, monitors the weekly activity of the laboratory, including the total number of participants who were scheduled, who did not show up, who were accepted into the study, and who were rejected from the study. If these numbers suddenly dip, then the team will have an instant indication that there might be a problem that should be addressed.

Documentation of the research results is organized into folders and participants are labeled with a code to follow ethical guidelines to preserve participant confidentiality. The individual's name is never openly viewable in the lab; only their initials are displayed for scheduling identification. The date and time scheduled of the participant's arrival is designated through initials in multiple places in our office for identification, such as calendars and binders. The PDA units are designated by a number code. In case of unit malfunction, the unit number is recorded and troubleshooting is commenced. All participant data downloaded from the PDA unit onto the computer is renamed to a unique participant number code. This data remains on the laboratory computer and is also backed-up on a memory stick in case of computer failure. For safety and data protection, all collected data is sent through email to the professor. The entire protocol is managed by the Laboratory Management sub-team of which every member is a part of.

Analysis of the test results begins with the entry of data into our database. Participant data is uploaded from the PDA onto the office computer and saved as a unique designated participant code. This procedure is conducted by the Data Management sub-team. Once data is collected from all fifty participants, the data is transferred to statistical software called SPSS. The daily PA and NA values of each participant will be compared to their end-of-week PA and NA values. The results will be aggregated and analyzed in SPSS to determine whether the data supports the project hypothesis in a statistically significant manner.

Each of the IPRO deliverables has been made the responsibility of a sub-team. The leaders of these sub-teams are responsible for working with and delegating tasks to the sub-team members. This is accomplished in a timely and scheduled manner, and time in meetings will be devoted to tracking the progress of the deliverables. The sub-team compiles the deliverables through input and communication with all the members of the project to ensure accuracy and reliability of information reported.

4.0. Expected results

The results of this research will have direct implications for clinicians and researchers in psychopathology. Any scientific evidence that further advances the knowledge of the accuracy which a depressed person reports their mood will contribute to the way clinicians understand and treat their patients. The hypotheses that will be tested by the research are as follows:

1. Depressed and non-clinical comparison participants will retrospectively exaggerate their levels of Negative Affect relative to online momentary ratings. In other words, both depressed and healthy volunteers will report that they experienced higher NA over their week long trial than they actually did.

2. Non-clinical participants will retrospectively exaggerate their levels of Positive Affect relative to online momentary ratings but depressed participants will not. In other words, healthy volunteers will report that they experienced higher PA over their week long trial than they actually did, while depressed volunteers' reports will report the same level of PA as they actually reported during the week.

Last semester, the IPRO team set the foundations for this term's project, which included everything from obtaining the PDAs to obtaining the first participants for the study. This data collection phase is the main focus of this semester's efforts, and, while last semester's lab work was productive, it was nevertheless a first effort that was sometimes unorganized, inconsistent, or failed to address certain responsibilities in the lab.

In order to be successful this term, the team realizes that it is very important to establish a very organized system in the laboratory and ensure that all members adhered to these guidelines. Thus, the greatest expectation of every team member is to adopt a high standard of performance in order to minimize mistakes and to keep the laboratory operating as smoothly as possible. If this principal expectation is met, the team expects to accomplish the following things:

1. Establish very clear and well-documented procedural standards for the laboratory and train each member to perform up to these standards.

2. Implement the second phase of recruitment as outlined by the first semester's three-tier recruitment plan.

3. Maintain a steady flow of participants visiting the lab to be screened and interviewed for participation in the study.

4. Obtain the overall goal of twenty-six depressed volunteers and twenty-six healthy volunteers who have completed the study and provided a complete and usable set of data.

5. Carefully organize and enter the data into our analysis software program, SPSS and minimize errors in the process

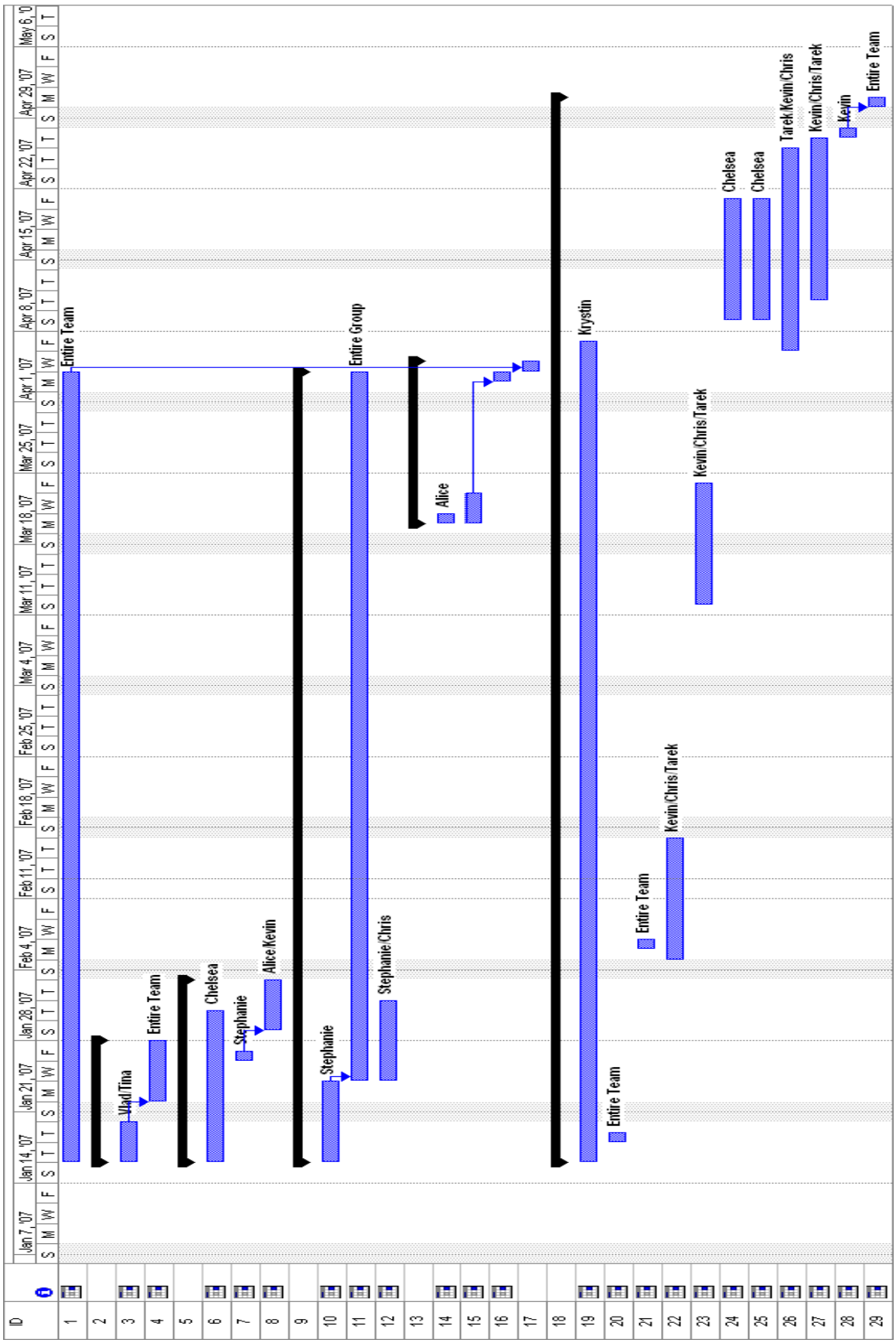
6. Begin data analysis (may not be complete by the end of the semester)

5.0. Project Budget

Item	Quantity	Amount ($)
Circulation Fans for Interview Rooms	2	40.00
General Office Supplies (Paper, Pencils, Folders, Storage Boxes)	as needed	428.84
Participant Compensation ($75 Each)	38	2850.00
Participant Newspaper Recruitment Ads		200.00
Printer, Copier, Fax Machine	1	149.99
Estimated Total		3668.83

6.0 Schedule of Tasks and Milestone Events

Task	Start	Finish	Resources	Hours
Data Collection	Jan 16	Apr 3	Entire Team	**448**
Recruitment	Jan 16	Jan 27	Entire Team	**48**
Compile second tier list	Jan 16	Jan 19	Vlad/Tina	8
Posting ads	Jan 22	Jan 27	Entire Team	40
Team member skill evaluations	Jan 16	Feb 2	Alice/Kevin	**34**
Train new member	Jan 16	Jan 30	Chelsea	10
Checklist complete	Jan 26	Jan 26	Stephanie	4
All members evaluated	Jan 29	Feb 2	Alice/Kevin	20
Laboratory Improvement	Jan 16	Apr 3	Entire Group	**438**
Assess problems/Develop Improvement Plan	Jan 16	Jan 23	Stephanie	20
Implementation of Improvement plan	Jan 24	Apr 3	Entire Group	400
Equipment upgrades	Jan 16	Jan 31	Stephanie/Chris	18
Data Management	Mar 20	Apr 4	TBA	**38**
Create data analysis sub-team	Mar 20	Mar 20	Alice	2
Develop data analysis procedures and manual	Mar 20	Mar 22	TBA	12
Train sub-team	Apr 3	Apr 3	TBA	8
Data organization and entry	Apr 4	Apr 4	TBA	16
IPRO Deliverables	Jan 16	Apr 6	Entire Team	**311**
Meeting Minutes (ongoing process; due Apr 6)	Jan 16	Apr 6	Krystin	35
Learning Objectives Pre-Test	Jan 18	Jan 18	Entire Team	2
Learning Objectives Post-Test	Feb 6	Feb 6	Entire Team	2
Project Plan	Feb 5	Feb 16	Kevin/Chris/Tarek	40
Midterm Report	Mar 12	Mar 23	Kevin/Chris/Tarek	35
Exhibit/Poster	Apr 9	Apr 20	Chelsea	30
Abstract/Brochure	Apr 9	Apr 20	Chelsea	15
Presentation	Apr 6	Apr 25	Tarek/Kevin/Chris	112
Final Report with Table of Contents	Apr 11	Apr 26	Kevin/Chris/Tarek	30
IPRO Deliverable CD	Apr 27	Apr 27	Kevin	2
IPRO Day	Apr 30	Apr 30	Entire Team	8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Apr 15, '07
Apr 22, '07
Apr 29, '07
May 6, '07
Entire Team
Vlad/Tina
Entire Team
Chelsea
Stephanie
Alice/Kevin
Stephanie
Entire Group
Stephanie/Chris
Alice
Krystin
Entire Team
Entire Team
Kevin/Chris/Tarek
Kevin/Chris/Tarek
Chelsea
Chelsea
Tarek/Kevin/Chris
Kevin/Chris/Tarek
Kevin
Entire Team

7.0. Individual Team Member Assignments

Instructors: Michael Young, Ph.D
Dror Ben-Ze'ev, M.S.

Name	Major / Minor	Skills/Strengths/Academic Interests
Tarek Abou-Nemeh	Biology	Creativity, motivation
Tina Chiu	Psychology	Writing, organization
Kevin Franke	Psychology	Writing, communication, problem solving, motivation
Krystin Hernandez	Political Science / Law	Writing, speaking, organizing, critical thinking
Alice Jacob	Biology / Psychology	Writing, presentation, organization
Chris Jones	Psychology / Political Science	Writing, speaking, public affairs
Chelsea Miller	Architecture / Psychology	Design, organization, creativity, writing
Vlad Vilenchik	Information Technology and Management	Writing, organization
Stephanie Walter	Aerospace/Mechanical Engineering/Psychology	MS Word, Excel, organization

Project Manager: Alice Jacob

Alice is responsible for managing all the individual sub-teams and ensuring that they remain on schedule by communicating regularly with all sub-team leaders and receiving periodic updates on the progress of each task. She is in charge of compiling an agenda for each meeting and leading the two weekly IPRO meetings. Alice is the team's IPRO office liaison as well as the contact person for any outside organizations the IPRO becomes involved with. As with all other team members, she is responsible for lab work and works with Stephanie, the lab manager, to ensure that the lab is running smoothly.

Recruitment Sub-team:

Team Leader	**Vlad Vilenchik/Tina Chiu**
Team members	**Entire team**
Description: This sub-team is responsible for advertising to recruit volunteers. During the first semester of the project, the Recruitment sub-team compiled a master list of all locations to advertise, which were then grouped into three different tiers according to distance from campus. The first tier was covered during the first semester, and Vlad and Tina made sure that the second tier was covered by the team from January 22nd-27th. The actual advertising is performed by all members of the IPRO team and not just the sub-team. It is important to note that the recruitment phase of this study will be ongoing through the semester.	

Technical Support Sub-team:

Team Leader	**Chris Jones**
Team members	**Entire Group**
Description: This sub-team is responsible for maintaining the best performance of PDAs and other lab equipment. The entire team will make sure participants are not having troubles with PDAs and, if any are encountered, they will immediately contact them in order to solve these problems.	

Data Management Sub-team:

Team Leader	**Tarek Abou-Nemeh**
Team members	**T.B.A.**
Description: This newly developed sub-team is responsible for the collection, organization, formatting, and entry of all data collected throughout project. This team will begin its work when the data collection phase of the project is complete.	

Project Plan/Midterm Report/Final Report Sub-team:

Team Leader	**Kevin Franke**
Team members	**Tarek Abou-Nemeh, Chris Jones**
Description: This sub-team was responsible for creating and submitting the IPRO deliverables listed above on time. This team will work together to have a rough draft of each document available for the rest of the team a week prior to the due date to allow time to receive feedback for possible improvements.	

Exhibit/Poster/Abstract/Brochure Sub-team:

Team Leader	**Krystin Hernandez, Chelsea Miller**
Team members	**T.B.A.**
Description: This sub-team is responsible for creating and submitting the IPRO deliverables listed above. This team will work together to have a rough draft of each document available for the rest of the team a week prior to the due date to allow time to receive feedback for possible improvements.	

Presentation Sub-team

Team Leader	**Tarek Abou-Nemeh**
Team members	**Tina Chiu, Kevin Franke, Chris Jones**
Description: This sub-team is responsible for preparing and performing the team's presentation on IPRO Day. This team will work together to have a rough draft of each document available for the rest of the team a week prior to the due date to allow time to receive feedback for possible improvements. Tarek is also responsible for organizing times for the team to practice the presentation sufficiently before IPRO Day.	

8.0. Designation of Roles

Lab Manager	Stephanie Walter
Stephanie manages all aspects of the IPRO lab. She was responsible for developing an R.A. schedule for the lab, in which each member is assigned three one-hour shifts per week where they are the research assistant on duty. She was also given the task of developing a comprehensive procedural manual for all activities to be completed in the lab during each member's shift. She oversees the organization and efficiency of all lab work and assumes the responsibility of managing any errors made in the lab by an R.A. In such instances, it is her responsibility to correct these errors and take the appropriate measures to prevent such errors from being repeated.	

New Member Trainer	Chelsea Miller
Chelsea was appointed the responsibility of training Krystin Hernandez, who was not a member during the first semester's work. Chelsea's specific duties included: providing the new member with all background material about the research study, providing her with the link to the IRB training website to become certified to participate in a research study involving human participants, walking her through the procedures to follow as a research assistant in the lab, and supervising her while she performed these tasks for the first few times.	

Lab Skills Evaluations	Alice Jacob and Kevin Franke
Sensing the importance of having every member of the team equally capable of performing each task in the lab, the faculty advisor appointed Alice and Kevin the duty of evaluating each team member's knowledge of the correct lab procedures. Stephanie, the lab coordinator, provided them with a comprehensive checklist of all steps and skills that are included in the normal scope of duties of a research assistant in the mood lab (this document has been included with the documents delivered for the project plan and is entitled "Appendix #3_Evaluation checklist.pdf"). Kevin and Alice collaborated to evaluate each team member using this checklist. When an R.A. was seen as lacking in a certain skill, Alice and Kevin were responsible for demonstrating the proper way to perform the tasks and testing them again until they demonstrated satisfactory ability to perform their job.	

Minute taker	Krystin Hernandez
Krystin is responsible for recording minutes during all IPRO meetings and uploading them to iGroups promptly after each meeting. At the end of the semester, she will compile all minutes as outlined in IPRO office guidelines and upload them to iKnow by the due date on Friday, April 6th.	

iGroups account manager	Chris Jones
Chris is responsible for the organization of the files posted to the group's iGroups account.	

Agenda/Weekly Task List	Alice Jacob
One of Alice's important tasks as Project Manager is to prepare an agenda for every	

meeting and a weekly task list for the team to accomplish. She will preside over the biweekly team meetings and ensure that these objectives are met.

Weekly Time Sheets	Stephanie Walter
Stephanie is the manager of the research laboratory. As such, she is responsible for collecting the weekly class, job, and extra curricular activity schedule from each of the team members and compiling them into a master schedule. After this was accomplished, she was able to set up a weekly schedule with hour-long shifts in the lab for each of the members. Each member has been assigned three one-hour shifts per week, and is expected to remain in the lab for the necessary time beyond these shifts in order to complete the tasks they are responsible for each day	

References

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