Miyazaki International College

Course Syllabus

Fall 2019

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| Course Title (Credits) | IDS 302 Research Methods 2: Data Analysis (3 Credits) |
| Course Designation for TC | N/A |
| Content Teacher | |
| Instructor | Futoshi Kobayashi, Ph.D. |
| E-mail address | fkobayas@sky.miyazaki-mic.ac.jp |
| Office/Ext | MIC 1-410/Ext. 3735 |
| Office hours | Tuesday & Thursday 15:45 - 17:15 |
| Language Teacher | |
| Instructor | N/A |
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| Office hours | N/A |

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| Course Description: | | |
| This course will expand on students’ skills acquired in Research Methods 1. Emphasis will be on research designs used in laboratory and in field settings, and on data analysis. Students will be expected to conduct research projects related to their own disciplinary interests, such as psychology, sociology, anthropology, political science, or economics. | | |
| Course Objectives: | | |
| This course introduces students to the process of conducting research. Students will have the opportunity to use research designs studied in Research Methods 1 to collect, enter, and analyze data, to interpret findings, and to present results to others. Students will conduct four different research projects: survey research, archival research, observational research, and qualitative research (i.e., interview-based case study).  Critical thinking: In this course we practice essential critical thinking skills including interpretation, analysis, evaluation, inference, and explanation. We will practice these critical thinking skills both formally through specific research assignments and tests, as well as more informally during class discussions, presentations, question and answer sessions, and other active learning activities. | | |
| Course Schedule: | | |
| Day | Topic | Content/Activities |
| 1:  10/2 (Wed.) | Introduction | Discussion of Syllabus  Explanation of Goals and Purpose of the Class  Log-in Moodle Course  Introduction of Web Dictionary  for English Learners  (HW) Read Chapter 11 Text |
| 2:  10/7 (Mon.) | Chapter 11: Describing Single Variables (1) | Chapter 11 Text Questions  Exercise 1: Frequency Table & Histogram  Central Tendency (Handout Explanation)  Exercise 2: Standard Deviation (SD) |
| 3:  10/9 (Wed.) | Chapter 11: Describing Single Variables (2) | Exercise 3: Mean, Median, Mode, SD, & Range  Exercises 4: Percentile Rank & *z* Score |
| **10/14 (Mon.)** | **No Class** | **MEI 80th Anniversary Ceremony** |
| 4:  10/16 (Wed.) | Chapter 12: Describing Statistical Relationships (1) | Chapter 12 Text  Chapter 12 Text Questions  Exercise 1: Cohen’s *d*, bar graph, & correlation  Correlation Activity 1: Possible Interpretations |
| **10/21 (Mon.)** | **No Class** | **MIC Festival Clean-up Day** |
| 5:  10/23 (Wed.) | Chapter 12: Describing Statistical Relationships (2) | Correlation Activity 2: Positive or Negative  Excel Activity (Handout & PC)  Exercise 2: Scatterplot & Pearson’s *r* (1)  Chapter 11 Test Preparation Guide |
| 6:  10/28 (Mon.) | Chapter 12: Describing Statistical Relationships (3) | Chapter 11 Test  Exercise 2: Scatterplot & Pearson’s *r* (2)  Exercise 3: Cohen’s *d* & Interpretation  Chapter 13 Text  Chapter 13 Text Questions (1) |
| 7:  10/30 (Wed.) | Chapter 13: Understanding Null Hypothesis Testing (1) | Return & Go over Chapter 11 Test  Chapter 13 Text Questions (2)  Video 1: Null & Alternative Hypotheses (Group Discussion)  Video 2: Understanding the *p* value (Group Discussion) |
| **11/4 (Mon.)** | **No Class** | **Substitute Holiday** |
| 8:  11/6 (Wed.) | Chapter 13: Understanding Null Hypothesis Testing (2)  &  Chapter 14: Some Basic Null Hypothesis Tests (1) | Exercise 1: Sample Size & Statistical Significance  Chapter 14 Text  Chapter 14 Text Questions  Exercise 1: One-Sample *t* test  Exercise 2: Mean, *t* value, & *p* value |
| 9:  11/11 (Mon.) | Chapter 14: Some Basic Null Hypothesis Tests (2) | Exercise 3: Correlated-Samples *t* test  Exercise 4: Independent-Sample *t* test  Exercise 5: One-Tailed or Two-Tailed Test  Exercise 6: One-Tailed or Two-Tailed Test & Statistical Significance  Chapter 12 Test Preparation Guide |
| 10:  11/13 (Wed.) | Chapter 15: Additional Considerations | Chapter 12 Test  Chapter 15 Text  Chapter 15 Text Questions  Video 1: Type I and Type II Errors (Group Discussion)  Video 2: Type I and Type II Errors (Group Discussion)  Exercise 1: Statistical Power |
| 11:  11/18 (Mon.) | Survey Research (1) | Return & Go over Chapter 12 Test  Survey Research Text  Survey Research Text Questions  Good Survey Questions Activity |
| 12:  11/20 (Wed.) | Survey Research (2) | Survey Research Guidelines  Survey Questions Sheet  Learn How to Use Google Form  Chapter 13 Test Preparation Guide |
| **13: 11/21 (Thursday but Monday Schedule)** | Survey Research (3) | Chapter 13 Test  Explain Example PPT & Evaluation Criteria  Sign-Up for Presentation Order  Presentation Preparation (1) |
| 14:  11/25 (Mon.) | Survey Research (4) | Return & Go over Chapter 13 Test  Presentation Preparation (2) |
| 15:  11/27 (Wed.) | Survey Research (5) | Survey Research Presentations |
| 16:  12/2 (Mon.) | Archival Research (1) | Archival Research Text  Archival Research Text Questions  Content Analysis Activity  Archival Research Guidelines  Research Question & Coding System Sheet (1)  Chapter 14 Test Preparation Guide |
| 17:  12/4 (Wed.) | Archival Research (2) | Chapter 14 Test  Research Question & Coding System Sheet (2)  Data Collection & Analysis in Library |
| 18:  12/9 (Mon.) | Archival Research (3) | Return & Go over Chapter 14 Test  Explain Example PPT & Evaluation Criteria  Sign-Up for Presentation Order  Presentation Preparation (1) |
| 19:  12/11 (Wed.) | Archival Research (4) | Presentation Preparation (2) |
| 20:  12/16 (Mon.) | Archival Research (5) | Archival Research Presentations  Chapter 15 Test Preparation Guide |
| 21:  12/18 (Wed.) | Observational Research (1) | Chapter 15 Test  Observational Research Video 1 (with Question Sheet)  Observational Research Activity  Practice Independent *t* Test on the Web  Observational Research Guidelines  Research Hypothesis Sheet (1) |
| 22:  12/23 (Mon.) | Observational Research (2) | Return & Go over Chapter 15 Test  Research Hypothesis Sheet (2)  Observational Research Data Collection Explain Example PPT & Evaluation Criteria  Sign-Up for Presentation Order  Presentation Preparation |
| 23:  1/6 (Mon.) | Observational Research (3) | Observational Research Presentations |
| 24:  1/8 (Wed.) | Qualitative Research (1) | Video 1: Quantitative vs. Qualitative  Research (Group Discussion)  Planning of Your Interview (Handout)  Video 2: How to do a research interview (Group Discussion) |
| **1/13 (Mon.)** | **No Class** | **National Holiday** |
| 25:  1/15 (Wed.) | Qualitative Research (2) | Good Interview Video (with Class Discussion) Video 3: Implementing In-Depth Interview Well (Group Discussion)  Video 4: What is a code? (Group Discussion)  Video 5: Why do we code? (Group Discussion) |
| 26:  1/20 (Mon.) | Qualitative Research (3) | Video 6: What does coding looks like? (Group Discussion)  Video 7: How to know you are coding correctly? (Group Discussion)  Transcript with Comments Example  Memo Example (1)  Questions Example  Practice Both Roles (i.e., Interviewer and Interviewee) |
| 27:  1/22 (Wed.) | Qualitative Research (4) | Memo Example (2)  Report Example  Make One’s Questions  Interview Practice with Recordings |
| 28:  1/27 (Mon.) | Qualitative Research (5) | Data Collection:  In-depth Interview with Random Pairs  Homework: Finish Making One’s Transcript. |
| 29:  1/29 (Wed.) | Qualitative Research (6) | How to Code One’s Data & Make Memos |
| 30:  2/3 (Mon.) | Qualitative Research (7) | Write One’s Report |
|  | Final Exam | Submission of Interview Questions, Transcript with Codes, Memos, and Written Report |
| Required Materials: | | |
| Bring a highlighter, a red pen, a pencil, an eraser, an English-English dictionary, and an A-4 binder to every class. Instead of using a standard textbook, handouts will be given in class. There are no textbooks necessary. Students are expected to keep this syllabus and all class materials organized neatly in a binder, and to bring the binder to every lesson. | | |
| Course Policies (Attendance, etc.): | | |
| You are expected to be punctual and to attend all lessons. A delay or early departure will be counted as a half (0.5) day absence. However, any absence, delay, or early departure can be excused if an official document (e.g., doctor’s notes) is submitted to your instructor within 7 days of such an occurrence. When you miss a lesson, it is your responsibility to see your instructor afterwards (and perhaps other students who attended the lesson), to find out how to catch up with the work you missed. If you expect to be absent from a forthcoming lesson, you should email your instructor to explain your absence at least one day in advance.    **A maximum of five and a half (5.5) absences is allowed. The sixth absence will automatically result in a withdrawal from the course.** | | |
| Class Preparation and Review: | | |
| Students are expected to spend at least one hour reviewing and doing homework and one hour preparing for every hour of lesson time. | | |
| Grades and Grading Standards: | | |
| 47% Chapter Tests (5 times)  30% Individual Presentations (10% for each of research presentation X 3 times)  23% Final Research Project (1% for Interview Questions, 2% for Memos, 10% for Transcript with Codes, & 10% for Written Report)  The final grade will be determined as below.  A: 90-100 points  B: 80-89 points  C: 70-79 points  D: 60-69 points  F: Less than 60 points  Plagiarism  Plagiarism is not acceptable at MIC. Students must submit their own work and not copy from other sources, unless they credit their sources with appropriate referencing. Students caught copying information from other sources and pretending that it is their own work will automatically result in a grade of ‘F’ or withdrawal from the course. | | |
| Methods of Feedback: | | |
| In principle, graded work will be returned within one week of submission with appropriate feedback, i.e., grade, comments, etc. | | |
| Diploma Policy Objectives: | | |
| Work completed in this course helps students achieve the following Diploma Policy objectives:   1. Advanced thinking skills (comparison, analysis, synthesis, and evaluation) based on critical thinking (critical and analytic thought) 2. The ability to identify and solve problems   5. Proficiency in the use of information technology | | |
| Notes: | | |
| The schedule, policies, and procedures in this course are subject to change at the discretion of the instructor. | | |

