Understanding the major analytic and quantitative tools used by practitioners engaged in assessing or evaluating human service systems is an essential component of social policy practice. This course will emphasize quantitative program analysis, and students will be asked to analyze an area related to a particular social problem. Students will acquire beginning level skills in the use of a wide variety of analytic and quantitative tools, while gaining in-depth skill in a more limited number of tools and techniques. Competence in these skill areas will be gained by completing a major analysis of a social problem area relevant to social welfare policy. The underlying theme of this course will be how to increase the rationality of the choice process when applied to complex and rapidly changing human service systems. In short, scientific analysis opposed to political analysis or advocacy is emphasized.

Students will learn the major analytic and quantitative tools used by practitioners in assessing or evaluating human service programs or systems, which include a range of specific programs. The theme of this course is how to increase the rationality of the planning, analysis, and evaluation process, particularly of programs intended to serve the underprivileged or oppressed populations. Students will learn that human service organizations include a wide variety of programs of diverse size and complexity, with respect to their activities and goals. This course will impart skills which can be applied at various levels of analysis in different contexts. Course session topics may include using the following sources or approaches: social experiments, social indicators, forecasting, simulation models, and so on to specify problems across systems of service; secondary sources (e.g., census, annual reports, surveys, evaluations and audits) to
quantify problems; primary sources (e.g., interviews, surveys, quasi experimental designs) to quantify problems; qualitative indicators of problems; developing options and solutions to systems of service problems; costing out options; utilizing other criteria (e.g., administrative ease, feasibility, stigma, etc.) to evaluate options; preparing analysis documents; diagnosing decision making situations; and enhancing utilization of results.

### Course Objectives

Upon completion of the course, students will be able to:

1. Demonstrate beginning level competence in the use of the major analytical tools that are most commonly used to assess and evaluate complex systems of services.
2. Demonstrate in-depth knowledge of two analytical tools and their application in the human services field.
3. Identify the limitations of rational analysis and be able to determine when rational choice processes are desirable and feasible to use.
4. Discuss typical ethical concerns related to the use of analytic methods in social policy practice.
5. Describe ways in which diversity dimensions such as "ability, age, class, color, culture, ethnicity, family structure, gender (including gender identity and gender expression), marital status, national origin, race, religion or spirituality, sex, and sexual orientation, as well community of residence" have an effect on the analytical tools that are most commonly used to assess and evaluate complex systems of services.

### Course Design

and discussion with students working in teams on contemporary issues. In addition, instructors may include participatory discussion, written assignments and experiential exercises related to course materials.

### Relationship of the Course to Four Curricular Themes

**Multiculturalism & Diversity:**
Students will develop the capacity to identify ways in which diversity dimensions such as "ability, age, class, color, culture, ethnicity, family structure, gender (including gender identity and gender expression), marital status, national origin, race, religion or spirituality, sex, and sexual orientation, as well community of residence" and other forms of social stratification and disenfranchisement influence and are impacted by the social policy practice process.

**Theme Relation to Social Justice:**
This course will provide students with the capacity to participate in the social policy process and the ability to approach policy analytically by virtue of social work practice and ethics. Students
will learn that social work practice and ethics play an important role in shaping the outcome of ongoing policy debates to reflect issues in social justice and change.

**Theme Relation to Promotion, Prevention, Treatment & Rehabilitation:**
Students will learn that policies in human services are too often implemented in reaction to an issue, not proactively, due to changing social, economic, and political circumstances and influences. Promotion, prevention, treatment, and rehabilitation activities are difficult to evaluate and therefore raise special challenges in social policy implementation. Students will be exposed to innovative evaluation techniques (e.g., forecasting and simulation models) that can be used to analyze and evaluate promotion, prevention, treatment, and rehabilitation activities prior to the development, implementation, and analysis of any relevant policy issue or initiative.

**Theme Relation to Behavioral and Social Science Research:**
Policies in human services are in a constant state of flux owing to changing social, economic, and political circumstances. Thus, any review of existing policy may be quickly outdated and has limited use as part of the training social work students carry into their careers. Therefore, students will be provided with social science models and theories that can be used as tools to analyze and evaluate any policy issue encountered in the course of their professional activities. Examples of the use of social science in policy development will be presented (e.g. Coleman report on education).

**Relationship to SW Ethics and Values**
Ethical standards of social work practice (NASW Code of Ethics) and evaluation practice (Program Evaluation Standards) will be used to review issues commonly confronted in social policy practice. The ethical themes of autonomy, beneficence, nonmaleficence, fidelity, and justice will be particularly emphasized and discussed.

**Text and Reading Materials for the Course**

**Required Text:**
There is no textbook for the course. Because this course will cover the basics of statistics and quantitative methods and its applications to policy analysis, you can use any statistics book that you have or you can check out from University libraries. Other reading for the course will consist of journal articles available online through [http://ctools.umich.edu](http://ctools.umich.edu). The articles include analytical tools that were used to evaluate social policy programs and services.

**Recommended Texts:**
**Statistical Software for This Class: Microsoft® Office Excel® 2007**

This class will use Microsoft® Excel® 2007 for your statistical analysis (available in campus computer labs). Because most of social work agencies have Microsoft® Office Excel®, it is useful for you to understand Excel in order to evaluate and analyze your projects at your workplaces.


Note: The references for Excel are available in an electronic version from the UM Library website (www.lib.umich.edu)

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**Evaluation of Student Outcomes: Assignments & Grading**

1. **ATTENDANCE**

   Attendance will be taken at the beginning of each class and lab section. Attendance in both classes and labs is mandatory. If you have to miss class or lab for any reason, notify the instructor ahead of time by email or by appointment and please see me to make sure that you are grasping the material (e.g., homework and class handout). There is a limit of two excused absences for the class. An excused absence is limited to health and family emergencies. Missing more than 2 classes or lab sections will result in a lower class grade.

2. **SMALL GROUP ACTIVITIES**

   There will be up to 9 small group activity assignments, each worth 11 points, which you will complete during your weekly small group activity section. For some assignments you will work alone and others will involve working in small groups. The lab assignments will involve exercises that give you an opportunity to apply the concepts discussed in class by performing various tasks associated with a research project.

3. **COMPUTER LAB ACTIVITIES WITH MICROSOFT EXCEL**

   We will have a weekly computer lab section in the Social Work computer lab. The lab work is mandatory for everyone regardless of one’s background and knowledge on Excel. Each lab section will have an assignment. Datasets can be downloaded from the CTOOLS to any PC computer. You will be expected to complete all lab assignments. There will be up to 9 computer lab assignments, each worth 11 points.

4. **HOMEWORK**
There will be up to 5 homework assignments during the course of the semester worth 20 points each. Typically, the homework assignments will ask you to apply concepts from lecture and your text book to the research articles assigned during the semester. The homework assignments will generally cover concepts reviewed in class. For each homework assignment, you will receive full points (20) for the homework assignment if your work evidenced a good faith effort to thoughtfully complete the homework regardless of whether or not you have the correct answers. Points will be deducted for incomplete assignments and for evident failure to make an effort to understand the material (i.e. persistently careless mistakes All homework assignments should be typed and double spaced unless otherwise specified. Handwritten assignments will not be accepted.

5. MID-TERM EXAM
The midterm will be take-home exams and consist of short-answer questions. You will receive a maximum of 150 points for the mid-term exam.

6. FINAL EXAM: RESEARCH PROJECT PRESENTATION
The Research Project will be 10 to 13 page PowerPoint slides in length. This project must be done individually. This presentation should include five sections: 1) Social problem of your choice (Literature review); 2) Introduction of your research project that will address this problem; 3) Data explanation; 4) Analysis (descriptive, bivariate, and multivariate analysis) and results; and 5) Discussion and implication. Before starting your project, each student will meet an instructor to confirm your research topic and data selection. Final grades (400 points) will be determined by your PowerPoint slides (200 points) and presentation (200 points). You will receive a detailed guideline about the Research Project.

7. READINGS
You are expected to read all of the material assigned BEFORE each class. The articles assigned in this class are used to provide examples of the concepts discussed in class.

8. GRADING
Attendance 100 points
Small Group Assignments 100 points
Computer Lab 100 points
Midterm Exam 200 points
Research Presentation 400 points (PPT slides & presentation)
Homework Assignments (5*20 point) 100 points
Total 1000 points

9. GRADING SCALE
A+ = 98-100, A = 94-97, A- = 90-93, B+ = 87-89, B = 82-86, B- = 78-81, C+ = 75-77, C = 70-74, not passing = <70
10. EARLY WARNING SYSTEM
Early warning system will detect students who will have low grade (C) before final research presentation. This system will help all students have better grade and better performance in this class.

11. POLICY ON SCHOLASTIC DISHONESTY
Under the Student Code of Academic and Professional Conduct which appears in the Student Handbook (http://www.ssw.umich.edu/studentGuide/2007/studentGuide2007.pdf), this class seriously considers plagiarism and other academic misconducts. For other information on academic integrity and proper citations for papers see SSW Library online tutorial on this topic http://www.lib.umich.edu/ugl/searchpath/index.html as well as the SSW Library web page on writing a paper, with links to plagiarism information at http://www.lib.umich.edu/socwork/researchpaper.html.

**If you think you need an accommodation for a disability, please let me know your special needs before or during the first week of this class. As soon as you make me know your needs, we can work with the Office of Services for Students with Disabilities (http://www.umich.edu/~sswd/index.html).

12. POLICY ON LATE ASSIGNMENTS
You must hand in all of your assignments on time. If you need more time to complete an assignment because of circumstances beyond your control please see me ahead of time (a day in advance) to ask for an extension. Extensions may or may not be granted depending upon the circumstances. If you must turn in an assignment late and you did not ask for an extension, include a written explanation of the reason for its tardiness along with the assignment. If the explanation is judged to be inadequate the assignment will not be accepted or will be accepted for reduced credit (10% a day).

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Course Outline

- Course overview
  - Introduction (Instructor, students, and course) / Measurement
  - Analytical Software for this class: Excel
  - Basic statistical test

1. Lecture Section : Descriptive analysis I : 8:00am-10:00am
   1) Introduction
   2) Basic statistical knowledge test
   3) Research Design and analytical methods
   4) Levels of measurement Mean, median, variance, standard deviation, frequency

2. Small Group Activities : 10:00am-11:00am
   1) Measurement
   2) Mean and median
3. Computer Lab section (SSW Computer lab): 11:00pm-12:00pm
   1) Introduction: Data analysis with Microsoft Excel
   2) Data input and output (frequency, percentage)
   3) Languages for Excel

**May 18, 2009 (Class 2)**
- Descriptive Analysis II
  - Frequency distribution, mean, variance, standard deviation, median, mode, percentiles

1. Lecture Section: 8:00am-10:00am
   1) Review: Levels of measurement
   2) Mean, median, variance, standard deviation, frequency
   3) Interpretation & applications to social policy practices

2. Small Group Activities: 10:00am-11:00am
   1) Interpretation of descriptive analysis
   2) Choose the best descriptive method and explain why

3. Computer Lab section (SSW Computer lab): 11:00pm-12:00pm
   1) Frequency, mean, median, mode, percentiles.
   2) Graph: Histograms, bar chart, scatter plot, pie chart, etc.

Required Readings:
*Please read the section for descriptive analysis (frequency, mean, median, standard deviation, etc) in your statistics book


**May 25, 2009  Memorial Day (No Class)**

**June 1, 2009 (Class 3)**
- Bivariate Analysis I
Levels of measurement, Central Tendency, Correlation

1. Lecture Section : 8:00am-10:00am
   1) Statistical inference (population and sample)
   2) Central error confidence interval
   3) Correlation
   4) Interpretation & applications to social policy practices

2. Small Group Activities : 10:00am-11:00am
   1) Interpretation and discussion

3. Computer Lab section (SSW Computer lab) :11:00pm-12:00pm
   1) Excel : Correlation coefficient, Scattergrams
   2) Interpretation

Readings:
*Please read the section for bivariate analysis (central tendency and correlation) in your statistics book*


**June 8, 2009 (Class 4)**
- Bivariate Analysis II
  - T-test, ANOVA, Chi square test.

1. Lecture Section : 8:00am-10:00am
   1) Central error confidence interval
   2) T-test, ANOVA
3) Bivariate cross tabulation and Chi-square
4) Interpretation & applications to policy practices

2. Small Group Activities : 10:00am-11:00am
   1) Interpretation and discussion

3. Computer Lab section (SSW Computer lab) :11:00pm-12:00pm
   1) Excel : T-test, ANOVA, Chi-square
   2) Interpretation

Readings:
*Please read the section for bivariate analysis (T-test, ANOVA, Chi square test)
in your statistics book


**June 15, 2009(Class 5): Research project 1st draft due.**

- Multivariate Analysis I
  - Dependent, independent variable, and hypothesis test
  - Ordinary Least Square (OLS) linear regression.

1. Lecture Section : 8:00am-10:00am
   1) DV, IV, and hypothesis
   2) Bivariate regression and correlation coefficients
   3) R-square and significant test for regression parameters
   4) Interpretation and application to social policy practices

2. Small Group Activities : 10:00am-11:00am
   1) Interpretation and discussion

3. Computer Lab section (SSW Computer lab) :11:00pm-12:00pm
1) Scatter plots and regression lines
2) Results and interpretation

Readings:
*Please read the section for multivariate analysis (OLS linear regression) in your statistics book


**June 22, 2009 (Class 6):**
- Multivariate Analysis II
  - Multiple OLS regression

  1. Lecture Section: 8:00am-10:00am
     1) DV, IV, and hypothesis
     2) Multiple regression
     3) R-square and significant test for regression parameters
     4) Interpretation and application to social policy practices

  2. Small Group Activities: 10:00am-11:00am
     1) Interpretation and discussion

  3. Computer Lab section (SSW Computer lab): 11:00pm-12:00pm
     1) Results and interpretation

Readings:
*Please read the section for multivariate analysis (OLS linear regression) in your statistics book


**June 29, 2009:** Midterm exam

**July 6, 2009 (Class 7):**
- Multivariate Analysis III
  - Logistic regression
  1. Lecture Section : 8:00am-10:00am
     1) DV, IV, and hypothesis
     2) Multiple logistic regression
     3) Odd-ratios and significant test for regression parameters
     4) Interpretation and application to social policy practices
  2. Small Group Activities : 10:00am-11:00am
     1) Interpretation and discussion
  3. Computer Lab section (SSW Computer lab) :11:00pm-12:00pm
     1) Results and interpretation

Readings:


**July 13, 2009 (Class 8): Research project 2nd draft due**

- Measurement and social indicators

  1. Lecture Section : 8:00am-10:00am
     1) Indicators for social policy analysis
     2) Designing or developing indicators
     3) Reliability and validity test
     4) Interpretation and application to social policy practices

  2. Small Group Activities : 10:00am-11:00am
     1) Discussion : the role of social indicators

  3. Computer Lab section (SSW Computer lab) :11:00pm-12:00pm
     1) Excel : Designing and testing indicators

Readings:


**July 20, 2009 (Class 9):**
- Research Design:
  - Experimental Design, Quasi-experimental Design, and Single Subject Design

  1. Lecture Section: 8:00am-10:00am
     1) Experimental Design
     2) Quasi-experimental Design
     3) Single Subject Design

  2. Small Group Activities: 10:00am-11:00am
     1) Discussion: Research design

  3. Computer Lab section (SSW Computer lab): 11:00pm-12:00pm
     1) Excel: Scatter graphs and line graphs for quantitative research design methods

Readings:
Book Chapter:

Articles:


**July 27, 2009 (Class 10): Research project presentation**
Please remember:
• Bring *journal articles, calculator, and textbook.*
• Turn off your cell phone in the classroom and the SW computer lab.