

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY  
RUTGERS SCHOOL OF GRADUATE STUDIES

EDWARD J. BLOUSTEIN SCHOOL OF PLANNING AND PUBLIC POLICY  
***DOCTORAL PROGRAM IN PLANNING AND  
PUBLIC POLICY***

**PROGRAM HANDBOOK**

*(revised Dec 2019)*

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## INTRODUCTION TO THE PROGRAM

Welcome to the Ph.D. program in Planning and Public Policy at Rutgers University. The doctoral degree, offered through the Rutgers School of Graduate Studies, is an advanced scholarly degree appropriate for students seeking a career in university teaching and research, planning and policy research and development in the public sector, and leadership positions in the private or non-profit sectors. Nearly 200 students have received the Ph.D. degree since the doctoral program was established in the 1960s. Graduates have obtained senior positions in universities, research centers, governments, non-profit organizations, and the private sector. A list of program graduates, their dissertation titles, and their current employment is attached in Appendix 1.

Diverse disciplines—reflected in the backgrounds of incoming students, in the positions filled by graduates, and in the academic and professional pursuits of the faculty—exemplify the flexibility of the doctoral program. This intentional diversity is central to the key goal of our program: to prepare students to pursue a variety of approaches exploring critical questions in planning and public policy and to shape innovative responses to those questions. The program enables its graduates to competently respond to the social, economic, and political problems and opportunities of our time, to anticipate new and emerging challenges, and to teach others to do the same.

This Handbook presents an overview of Ph.D. program requirements and outlines the process you will follow to complete the degree. The doctoral degree process involves six key components:

1. Credit requirements
2. Required courses
3. Student advising and mentoring
4. Qualifying examinations
5. Forming a dissertation committee and preparing a dissertation proposal
6. Writing and defending your doctoral dissertation

We summarize these elements in Table 1 and follow with a description of key aspects of the process. A suggested *Program Navigation Guide* for scheduling critical steps in the program is provided in Appendix 2.

For more information, to answer your questions, and to facilitate your progress through the degree, you should maintain regular and frequent contact with the various individuals who are here to help you. These include your faculty advisor, the doctoral program Director, the doctoral faculty, and the staff in the Bloustein School's Office of Student Services. When in doubt about any aspect of the program, seek out any of these individuals for information and guidance.

**Table 1. SUMMARY OF Ph.D. PROGRAM REQUIREMENTS**

**1. Credit Requirements**

72 credits (minimum) are needed to graduate, as follows:  
 40% of previous graduate coursework can be transferred (*24 credit maximum*)  
 24 credits of EJBS coursework, including required courses + electives  
 24 research credits (minimum)

**2. Required Courses**

Theory: 762:624 Planning, Public Policy, and Social Theory

Methods: 833:628 Advanced Qualitative Methods  
 970:630 Discrete Choice Methods  
 One additional advanced methods course

Research Workshop: 762:626 Advanced Scholarly Research

**3. Student Advising and Mentoring**

A faculty advisor is assigned to each in-coming student. After the first semester, each student may select his or her own advisor.

First-year and second-year students submit a "Program of Study" (PoS) form in the Fall semester and meet with faculty to develop a program strategy.

**4. Qualifying Examinations**

Doctoral students are required to pass four comprehensive exams to qualify for candidacy in the Ph.D. program. All exams include both written and oral portions:

- a. Theory of and in planning and public policy
- b. Methods (quantitative and qualitative methods and research design)
- c. First substantive field
- d. Second substantive field

The Methods exam may be taken at any time after the student has completed the required methods classes 628 and 630 (see above).

In order to take the three remaining exams (Theory, First Field, Second Field), students must have:

Completed 48 credits, including transfer credits; except Advanced Scholarly Research which is normally taken after passing exams.

A minimum cumulative GPA of 3.5

No outstanding Incomplete (IN) grades

The written portions of the Theory, First Field, and Second Field exams, as well as a combined oral covering all three exams, **must be completed within a single semester.**

At the completion of all qualifying exams, the exam portion of the ***Degree Candidacy Form*** (DCF) is signed by the faculty and placed on file with the Rutgers School of Graduate Studies.

#### **5. Dissertation Committee and Dissertation Proposal**

Student selects a dissertation committee chair from members of the Bloustein School graduate faculty (see Appendix 6).

Student forms a dissertation committee of four faculty members who agree to participate, consisting of:

- The committee chair

- Two additional members of the Bloustein School graduate faculty

- One member from outside the Bloustein School

Within three months of completing Advanced Scholarly Research, and with approval of the dissertation committee, the student presents a dissertation proposal at an open public meeting, followed by an oral defense of the proposal before his or her dissertation committee.

All doctoral students and faculty are invited and expected to attend the public portion of proposal defenses scheduled throughout the academic year.

#### **6. Researching, Writing, and Defending the Dissertation**

The doctoral dissertation makes an original contribution to planning and public policy through the rigorous analytical examination of theory and evidence supporting a significant argument or testing a relevant hypothesis.

With approval of the doctoral committee, the student presents the results of his or her dissertation research at an open public meeting, followed by an oral defense of the dissertation before the committee.

All doctoral students and faculty are invited and expected to attend the public portion of dissertation defenses scheduled throughout the academic year.

After successful defense of the dissertation, the committee signs the final-exam portion of the DCF, which is then forwarded to the Rutgers School of Graduate Studies as certification of completion of the requirements for the Ph.D. degree.

## DETAILED REQUIREMENTS AND DEGREE PROCESS

### A. ADMISSION AND FINANCIAL AID

#### **Admission**

Admission to the Ph.D. program requires a formal application with supporting documents, references, a full resume, and evidence of research ability. In most cases, only applicants who have completed a Master's degree or its equivalent are considered for admission. In rare instances, exceptional students may be considered after they receive their Bachelor's degree or, for students enrolled in Bloustein School Masters programs, after completion of twelve graduate credits. Information on the application process is available on the Rutgers School of Graduate Studies' Web site at <http://gradstudy.rutgers.edu/>.

The number of students admitted to doctoral study depends on (1) the number of applicants who display a high level of performance; and (2) the faculty's capacity to provide high quality supervision in the students' areas of interest. Normally, 3-6 doctoral students enter the program each year, selected from about 80 to 100 applicants. Applications are carefully reviewed by the PhD program director and faculty who best match an applicant's research interests. As admission is highly competitive, students are urged to submit their application by no later than January 15<sup>th</sup>. Applicants are notified of the admission decision in mid-March or early April.

#### **Financial Aid**

Financial support for doctoral students is available in the form of fellowships, teaching assistantships, and research assistantships. Many doctoral students also obtain funding through appointment as adjunct instructors, in hourly work at research centers or on faculty research projects, and from other sources. Students should exercise initiative in contacting center directors and/or individual faculty members regarding opportunities for hourly work on research related to their interests. Students interested in applying for external fellowships and other forms of research support (e.g., Fulbright, NSF, HUD, NIH, etc.) should contact the University's GradFund program: The Resource Center for Graduate Student External Support at <http://gradfund.rutgers.edu>.

**Entering students** wishing to be considered for financial aid should so indicate by checking the appropriate box on their application for admission; no separate application form is required. Since the number of students seeking financial support always exceeds available resources, students should seek all appropriate sources of funding that might be available to them. For entering students who receive multi-year funding offers, continuation funding beyond the first year requires evidence of satisfactory progress through the program.

**Continuing students** can apply for funding each year by completing the *Financial Scholarship, Fellowship and Assistantship Application* available from the Bloustein School's Office of Student Services.

## **B. DOCTORAL PROGRAM LEARNING GOALS**

This program prepares students for careers in university teaching and research, and in advanced planning and public policy research in the private, public, and non-profit sectors.

These learning goals track the doctoral student's progress through the program; they are considered satisfied when the specified assessment mechanisms have been successfully completed.

**1. Theoretical Understanding:** Students will develop and demonstrate a mastery of the theoretical frameworks underlying the disciplines of planning and public policy through coursework and a comprehensive written and oral examination.

Assessment:

(a) grade of B or higher (or waiver of participation) in *Planning, Public Policy and Social Theory* (16:970:624), and

(b) successful completion of the Theory Qualifying Examination.

**2. Analytical Thinking:** Students will develop and demonstrate advanced skills in social science qualitative and quantitative methods through coursework and a comprehensive written and oral examination.

Assessment:

(a) grade of B or higher (or waiver of participation) in *Advanced Qualitative Methods* (34:833:628), *Discrete Choice Methods* (34:970:630), and a third methods elective approved by the PhD program director, and

(b) successful completion of the Methods Qualifying Examination.

**3. Specialization in a Subjects Fields of Inquiry:** Students will develop and demonstrate advanced knowledge in two subject fields of study related to planning and public policy through coursework, independent study, and a comprehensive written and oral examination.

Assessment:

- (a) grade of B or higher (or waiver of participation) in 33 credits of general elective coursework and/or independent study, and
- (b) successful completion of each of two Study Fields Qualifying Examinations.

**4. Inquiry, Analysis and Communication:** Students will demonstrate the ability to perform scholarly research and writing through the thesis component of the doctoral program.

Assessment:

- (a) grade of "Satisfactory" (or waiver of participation) in *Advanced Scholarly Research* (16:970:626) and grade of "Satisfactory" for 24 research credits, and
- (b) successful completion, public defense, and acceptance by the Graduate School-New Brunswick of a dissertation.

**5. Teaching and Professional Development:** Students will develop and demonstrate teaching and professional skills in venues appropriate to the subject matter of their individual doctoral program of study.

Assessment:

This Learning Goal is assessed via the accumulation, over the student's program of study, of a portfolio of materials, including, but not necessarily limited to the following:

- (a) instructor teaching shall be assessed by the PhD program director's review of teaching evaluations, which shall be measured as "Exceeds Expectations," "Meets Expectations," or "Does Not Meet Expectations," for each instance in which the doctoral student/candidate served as an instructor;
- (b) service as a Teaching Assistant shall be assessed by the instructor/professor for whom the student served and shall be measured as "Exceeds Expectations," "Meets Expectations," or "Does Not Meet Expectations" for each instance in which the doctoral student/candidate served as a Teaching Assistant;
- (c) assessment of presentation of posters and/or papers is satisfied by the acceptance of and presentation at a competitive conference of a poster and/or paper; it shall be the student's responsibility to present the Bloustein Graduate Program Coordinator with evidence of such acceptance and presentation;

(d) assessment of other conference participation and service is satisfied by participation as a discussant or panel chair at a competitive academic conference, as well as Bloustein-sponsored conferences including, but not limited to, the annual Krueckeberg Doctoral Conference in Urban Studies, Urban Planning and Public Policy; it shall be the student's responsibility to present the Bloustein Graduate Program Coordinator with evidence of such acceptance and presentation;

(e) the Doctoral Program Director may approve such other Teaching and Professional Development portfolio items to satisfy the assessment of this learning goal as may be reasonable in the context of the subject matter of a doctoral student's individual program of study.

### C. COURSE REQUIREMENTS, TRANSFER CREDITS, AND RESIDENCY

#### Credit Requirements

Students entering the program with a Master's degree must complete a minimum of 48 credits of coursework and an additional 24 research credits, yielding the minimum requirement of 72 credits for the doctoral degree. Up to 24 of the 48 coursework credits may be transferred in from previous graduate-level courses, subject to approval by the doctoral program Director (see "Transfer Credits" below).

#### Required Courses

Students in the doctoral program are **required** to take the following **five** classes:

**Theory:** 16:762:624 Planning, Public Policy, and Social Theory

**Methods:** 34:833:628 Advanced Qualitative Methods  
34:970:630 Discrete Choice Methods  
One additional advanced methods or research design course related to the student's dissertation research, subject to approval by the doctoral program Director (see Table 2 below).

**Research Workshop:** 16:762:626 Advanced Scholarly Research

**Table 2. METHODS COURSES**

#### Objectives

1. Every doctoral student should have core competency in **both** quantitative and qualitative methods.
2. Every doctoral student should have advanced competency in a specialized research method or research design appropriate to the student's dissertation research.

**Core competency requirements**

Qualitative methods: 34:833:628 Advanced Qualitative Methods  
 Quantitative methods: 34:970:630 Discrete Choice Methods

Prerequisite for Discrete Choice Methods is lower-order statistical knowledge and a working knowledge of multiple linear regression gained from 970:515/833:521 Basic Quantitative Methods or equivalent introductory statistics class.

**Advanced competency requirements**

A second-semester **advanced qualitative or quantitative methods or research design course**, selected from Bloustein course offerings **or** an independent (directed) study providing advanced competency **or** an appropriate advanced methods or research design course offered elsewhere at Rutgers or at another institution.

**Recommended methods courses** offered at the Bloustein School include:

Survey Research (34:833:635)  
 Cost-Benefit Analysis (34:833:632)  
 Program Evaluation (34:970:594)  
 Introduction to GIS (34:970:591)  
 Topics in GIS (34:970:592)

**Note:** Selection of a methods course that meets the advanced competency requirement must be approved by the student's academic advisor and the doctoral program Director. **All students should have the Methods Course Approval form signed by their supervisor and their doctoral advisor, and then deliver this to student services.**

There is no foreign language requirement, except as recommended by the student's academic advisor or dissertation committee.

**Diagnostic Methods Exam**

Entering doctoral students in their first semester who have completed prior graduate-level methods courses may be able to test out of one or both of the required core methods courses (628 and/or 630). Students who believe they have already mastered the material covered in the required core methods courses may, in consultation with their academic advisor, demonstrate their competency in qualitative and/or quantitative methods by passing a diagnostic exam. Passing the qualitative and/or quantitative portion of the diagnostic exam qualifies the student as having met the corresponding core methods course requirement(s).

The decision to take the diagnostic methods exam is entirely up to each student, in consultation with his or her academic advisor and the doctoral program Director, and does not reflect in any way on the student's competence or standing in the program. Students considering whether to take the diagnostic exam should consult the course syllabi for the core methods courses to familiarize themselves with the material covered in those courses and in the corresponding diagnostic exam. Students opting to take the

diagnostic methods exam should notify the doctoral program Director at least two weeks before the start of the Fall semester of their first year. Testing out of a required methods course or courses does not confer course credits, which must be made up through other (elective) coursework.

### **Elective Courses**

The choice and sequence of remaining coursework for each student is guided by the student's academic advisor, the doctoral program Director, and the Program of Study (PoS) committee (*see section G below*). As a general rule, doctoral students should not take introductory-level graduate courses offered in the Master's programs in Planning and Public Policy (indicated by course numbers 500-530), except with permission from their faculty advisor.

### **Transfer Credits**

Graduate courses completed at other institutions may be accepted for credit toward the doctoral degree, subject to conditions outlined by the Rutgers School of Graduate Studies and with the approval of the doctoral program Director. Transfer credits usually apply to courses with a substantive focus that is relevant to the student's doctoral studies, and do not normally include studio courses, independent or directed studies, or Master's thesis research. Up to 24 credits may be transferred in from prior graduate coursework, but not exceeding 40% of the total credits applied toward the prior graduate degree. All transfer credits must be for courses with at least a grade of "B" or equivalent. The procedure for transfer of credits involves completing a form (available from the Office of Student Services) and obtaining the approval of the doctoral program Director.

### **Research Credits**

Doctoral students are required to complete 24 research credits, usually beginning in the semester during which they prepare for and/or take their qualifying exams. Registration for research credits normally allows the student to prepare for qualifying exams and conduct dissertation research. Credits for Directed Study count toward coursework and may *not* be used for research credits. From 1 to 12 research credits may be taken in any one semester. The number of research credits allowed in a semester (between 1 and 12) should be commensurate with the scope and quality of the research, and requires the approval of a faculty member supervising the research. **The student and supervising faculty member should discuss the topic, scope of work, expected product(s), and schedule at the beginning of the semester and this discussion should guide the research and grading.** Research credits are graded either "S" (satisfactory) or "U" (unsatisfactory).

Once students have completed 72 credits of coursework and research, **they must continue to register for at least one research credit each semester to maintain enrollment** until they have completed all requirements for the doctoral degree (i.e., completed and defended their dissertation).

### **Full- and Part-Time Residency**

The doctoral program does not require full-time residency. However, students must register for at least six credits of coursework (normally equivalent to two classes) in each semester prior to taking qualifying examinations.

#### **D. PROGRAM PARTICIPATION**

Formal coursework is just one of many avenues for scholarly learning and intellectual interaction in the Bloustein School. All doctoral students are expected to attend and actively participate in the full range of seminars, colloquia, and other presentations that enrich our academic community. Some of the regularly scheduled activities in which doctoral students are expected to participate include (but are not limited to):

- *Ph.D. Lunchtime Colloquium*, at noon about every two to three weeks during Fall and Spring semesters – informal discussion of professional skills and current student and faculty research
- *Bloustein Colloquium*, at noon every two to three weeks, during Fall and Spring semesters – invited speakers on a broad variety of current research topics across the disciplines
- *Dissertation Proposal Presentations* – the public lecture portion of the proposal defense
- *Dissertation Lectures* – the public lecture portion of the dissertation defense

#### **E. EVALUATION OF DOCTORAL STUDENTS**

Student progress toward the degree is evaluated by the doctoral program faculty at the end of each semester. Failure to maintain a semester grade point average of 3.5 or a cumulative grade point average of 3.5 is cause for a student to be considered for dismissal from the program. No more than 9 credits with grades of C or C+ may be counted toward fulfillment of the requirements for the doctoral degree. Students must obtain a grade of B or better in core courses (Discrete Choice Methods, Advanced Qualitative Methods, and Planning, Public Policy, and Social Theory or equivalents). A grade of B or better must be achieved before taking the equivalent Methods or Theory examinations. Students are allowed to repeat these core courses once.

In the event of insufficient evidence of progress toward the degree, a conference will be called which will include four persons: the doctoral program Director, a member of the doctoral program faculty (usually the student's academic advisor), the coordinator of student and academic services, and the student. The conference provides a frank discussion of the student's strengths and weaknesses and conveys an assessment by the faculty and staff as to the student's prospects for completing the doctoral program in a timely manner. The doctoral program Director will provide the student with a written statement of the assessment. If a student wishes to continue in the program after being

advised of his or her limitations, the doctoral program Director may prescribe courses or other remedial action for the student to take in the following semester or semesters. Failure to demonstrate an ability to meet the criteria for continuation within the specified time period may be reason for dismissal from the program.

Normal progress toward the degree implies timely completion of coursework, qualifying exams, and dissertation research. Under the regulations of the Rutgers School of Graduate Studies, students registered in the program beyond a period of seven years must apply annually to the Rutgers School of Graduate Studies for permission to continue to enroll. The application must specify the reasons for continued enrollment and must establish clear deadlines for completion of the degree. The Application for Extension of Time form is available from the Rutgers School of Graduate Studies at <http://gsnb.rutgers.edu/forms/index.php3>.

#### **F. INCOMPLETE GRADES**

A grade of incomplete (IN) in a course is given only when circumstances beyond the student's control merit granting extra time for completing course requirements. Students must apply for an IN grade in writing using the form obtained from the Office of Student Services. The application must include a statement of the circumstances meriting the IN grade and a contract that defines the nature of the incomplete work and the date by which it is due. The contract must be signed and dated by the student, the faculty member, and the doctoral program Director before an IN grade can be assigned.

Should a student require a further extension of the contract, he or she must obtain permission for the extension from the course instructor and the doctoral program Director. Only one extension may be granted to any contract. After one year, the IN grade automatically converts to a permanent incomplete (PIN). When this happens, a student will not receive another grade or credits for the course in question. A student may maintain two INC grades for no more than a single semester. If at least one is not converted to a final grade, the student may be prohibited from registering for the following semester. Students who receive more than one INC within the first 12 credits of coursework in the program will receive a written warning and must meet with the review committee to discuss the problem (*see Section D above*).

#### **G. STUDENT ADVISING**

A faculty advisor is assigned to each in-coming doctoral student. After the first semester, each student may select his or her own advisor among members of the graduate faculty in the Bloustein School, upon mutual agreement between the student and faculty member (please inform the student services office if you select another advisor). The faculty advisor is not the Chair of the student's doctoral committee but serves to provide

guidance and advice until a Chair is selected. The advisor often becomes the Chair, but this is not always the case.

Students are strongly encouraged to seek out faculty outside of formal classes (during office hours or by appointment) to learn about on-going research, discuss mutual interests, seek mentoring or advice, and discuss any program-related issues that might arise. *It is the student's responsibility to make full use of faculty advising through frequent and regular contact with faculty advisors, other program faculty, and the doctoral program Director.* The doctoral program Director is available to answer questions, provide guidance, or discuss student progress through the program. While program faculty and the program Director carefully monitor student progress, it is the student's responsibility to take the initiative to maintain regular contact with faculty advisors.

## H. PROGRAM OF STUDY

The Program of Study (PoS) process is **required** for all first- and second-year students in the Ph.D. program who have not yet completed their qualifying exams. The process is designed to help you in selecting courses appropriate for your field of study; identifying relevant faculty and other resources both within and outside the Bloustein School; choosing an academic advisor; developing a direction for dissertation research; and preparing for qualifying exams.

The Program of Study process involves two parts: (1) compiling information on your coursework, program goals, and research interests by completing the Program of Study form in Appendix 4; and (2) meeting with the Program of Study committee in the Fall semester of the first and second year to jointly review and discuss your program. The PoS committee includes the Ph.D. Program Director and program faculty with interests similar to your own. Students are encouraged to request specific faculty to participate in their PoS meetings, and can indicate this on their PoS form. Sometimes it is difficult to arrange meetings at which all faculty can be present, and in these cases we will find suitable alternatives.

## I. RESPONSIBLE CONDUCT OF RESEARCH

All students are required to be certified that they understand the ethical issues involved with conducting research, and in particular, research involving human subjects. Rutgers works with the CITI program to provide on-line courses and required certifications. During your first year of studies, you must complete two courses and complete the certification quiz. Go to this website to register and take the courses: <https://orra.rutgers.edu/citi>

### **Human Research - Social / Behavioral / Epidemiologic Research Investigators**

This course covers the basics of human-subjects research. On successful completion you will receive a certification which is needed for any application to the Institutional Research Board (IRB) for human-subjects research (<https://eirb.rutgers.edu/eIRB>).

### **Social and Behavioral Responsible Conduct of Research**

This course covers a broad spectrum of topics concerning responsible conduct of research. This is required if you apply for funding from various agencies.

Please email your certificates to the Graduate Administrator once you have successfully completed the courses.

### **J. SELECTING A DISSERTATION CHAIR**

Before presenting her or himself for the qualifying examinations (*see Section I below*), a student must select a member of the doctoral program faculty who agrees to chair and supervise the student's doctoral dissertation. The dissertation chair does not necessarily have to be the student's former academic advisor. Except in very exceptional cases, the dissertation chair is a tenured member of the doctoral faculty.

In selecting a dissertation chair, the student should engage in discussion with potential faculty members to identify mutual interests and the likelihood of establishing a compatible working relationship. Since the dissertation chair often becomes the student's principal advocate within the program and an important reference for future endeavors, students should be diligent in their selection. Following inquiry and discussion, the student must have the faculty member sign the **Selection of Committee Chair form**; this is then taken to the Program Director for signature and then to the Office of Student Services.

### **K. QUALIFYING EXAMINATIONS**

Qualifying examinations certify that the student is "qualified" to transition from coursework to independent dissertation research. Passing the qualifying examinations constitutes formal advancement to candidacy for the Ph.D. degree. Basic information on Qualifying Exams is summarized here. Detailed information is provided in the document titled *Doctoral Qualifying Exams: Components, Timing, and Preparation* in Appendix 5.

#### **(1) Required Examinations**

Doctoral students in Planning and Public Policy are required to pass written and oral qualifying examinations in the following four areas:

- **Theory:** of and in planning and public policy.
- **Methods:** including core competency in qualitative and quantitative analysis and research design. [**Note:** Passing the qualitative and/or quantitative section of the

diagnostic methods exam (see Section B on page 6, above) does **not** exempt the student from taking and passing the Qualifying Examination in Methods.]

- **First Field:** a topical specialization within planning and/or public policy, requiring broad familiarity with a substantive literature that is central to the student's anticipated dissertation research.
- **Second Field:** a second topical or substantive specialization closely related to the student's anticipated dissertation research and defined so that the subject matter does not overlap with the First Field; or a related field other than planning and public policy (e.g., civil engineering, computer science, economics, geography, political science, sociology, or another field) that the student can show is relevant to his or her dissertation research.

**First Field** and **Second Field** exams assess the student's comprehension and mastery of a substantive literature relevant to the topical specialization covered by each exam. Each field exam should include relevant theory to the subject matter being examined. Selection of topical specializations comprising the First and Second Fields is the responsibility of the student together with his or her selected examiners, in consultation with and approved by the student's academic advisor and the doctoral program Director.

## **(2) Scheduling Qualifying Exams**

Students are encouraged to take qualifying exams as soon as they are eligible to do so. Normally the Methods exam will be scheduled soon after completing the required Methods courses and the theory and subject exams will be completed by the fourth semester (for full-time students). Students must achieve a grade of B or better in the required methods and theory courses, prior to taking the corresponding examination. **All exams should be taken not later than four years after the student first registered in the Rutgers School of Graduate Studies and not later than two semesters before taking the final dissertation examination.**

**Methods.** The Methods examination may be taken in any semester after the student has completed the two required core-competency methods classes with a grade of B or better:

(628) Advanced Qualitative Methods

(630) Discrete Choice Methods

**Note:** The required (third) advanced methods course may be taken either before or after the student passes the Methods qualifying exam, as guided by the student's dissertation research direction and interests.

The doctoral program offers the Methods qualifying examination twice a year, once in the Fall semester and once in the Spring semester, on a date set by the Methods examiner(s)

and announced in advance. The oral portion of the Methods exam usually occurs one to two weeks following the written exam.

***Theory and Field examinations.*** The student must complete written examinations in Theory, First Field, and Second Field during the second year of studies (for full-time students). The oral examination for theory and fields is conducted jointly and normally occurs after the written theory examination is completed.

To take qualifying examinations in Theory, First Field, and Second Field, students must have:

1. Completed all coursework, except Advanced Scholarly Research (including up to 24 transfer credits)
2. Have a minimum cumulative GPA in the program of 3.5
3. Have **NO** outstanding Incomplete (IN) grades

The doctoral program director may approve any requests to take the examination prior to completing 45 credits of coursework.

The doctoral program offers the qualifying examination in Theory twice a year, once in the Fall semester and once in the Spring semester, on a date set by the Theory examiner(s) and announced in advance. It is recommended that students begin preparations for the Theory and Field examinations at the end of their first year of studies with a goal to complete these by their 4<sup>th</sup> semester, prior to taking Advanced Scholarly Research in their 5<sup>th</sup> semester (in the Fall). Part-time students may do this in their 6<sup>th</sup> semester and take Advanced Scholarly Research in their 7<sup>th</sup> semester.

### **(3) Preparing for Qualifying Exams**

At least one semester (and preferably more) before the student intends to take qualifying exams, he or she, in consultation with the faculty advisor and with the approval of the doctoral program Director, must select an examination committee from among members of the doctoral program faculty (see Appendix 6). The examination committee must include one faculty member specializing in research methods, one member specializing in theory, and two members whose specializations match the student's First and Second Field topics.

***Theory and Methods.*** The format and scheduling of qualifying exams in Theory and in Methods are set by the doctoral faculty and are uniform for all students taking those exams in any given semester. Recommended reading lists and additional useful information on preparing for qualifying exams in Theory and in Methods are provided in Appendix 5.

***First and Second Fields.*** The student is responsible for selecting faculty examiners for his or her First and Second Field exams and should initiate this process at least one semester

*(and preferably more) before the intended exam date.* The format and substantive content for First and Second Field exams are decided by mutual agreement between the student and the respective faculty examiners for those two exams.

Except in very unusual circumstances, preparation for First and Second Field exams requires the student to prepare a comprehensive reading list of the extant literature relevant to the selected topical areas. This reading list encompasses the primary literature covered in the examination. Working closely with their First and Second Field examiners, students should begin the process of delineating the substantive focus and preparing reading lists for these exams at least one semester (and preferably more) before the intended exam date.

#### **(4) Oral Exams**

Oral exams provide an opportunity for follow-up discussion and/or clarification of questions posed in the written exams, and for any other matters chosen by the examiners.

**Methods.** The oral component of the Methods exam is arranged by the Methods examiner(s) and is scheduled to follow the written Methods exam in a timely manner, usually within a week or two after the written exam.

**Theory, First Field, Second Field.** A single combined oral exam covering Theory, First Field, and Second Field must be completed after completion of all written components. *It is the student's responsibility to arrange a date and time for the combined oral exam that are agreed to by all three examiners. This process should be initiated as early as possible, certainly as soon as the dates of the written exams have been decided, to accommodate work schedules of faculty who are often asked to schedule multiple exams in the same semester.*

#### **(5) Exam Adjudication**

After passing all qualifying exams, the student obtains the signatures of his or her examiners on the exam portion of the *Degree Candidacy Form (DCF)* obtained from the Rutgers School of Graduate Studies, indicating that the student has advanced to candidacy for the Ph.D. degree. The signed form is kept on file at the Rutgers School of Graduate Studies until the student successfully defends his or her dissertation and completes all requirements for the degree.

Should the student fail any part of the examination, the examination committee in conjunction with the doctoral program Director will advise the student to pursue one or more of the following options: (1) retake part(s) or all of the exam(s) at a specified time; (2) take additional courses or submit additional written and/or oral work; (3) withdraw from the doctoral program. Any additional requirements under options (1) or (2) will be specified by the examiner(s) in writing and must include a timeline by which work must

be completed to the satisfaction of the examiner(s). Failure to complete the required work by the specified deadline will be cause for the student's withdrawal from the doctoral program.

**Any student who remains registered in excess of 10 years may be required to retake the qualifying examinations prior to their final dissertation defense. All students who apply for readmission may also be required to retake the qualifying examinations.**

#### **L. FORMING A DISSERTATION COMMITTEE**

Upon passing the qualifying examinations, the doctoral candidate, in consultation with his or her dissertation chair and the doctoral program Director, forms a dissertation committee comprised of at least four faculty members. *It is the student's responsibility to form a dissertation committee by discussing his or her research interests with potential committee members and obtaining their agreement to serve on the committee.*

The dissertation committee normally (but not necessarily) includes some or all of the faculty members who served as the student's examining committee for Qualifying Exams. Three of the four committee members are members of the doctoral program faculty in the Bloustein School (see Appendix 6 for a list of program faculty). The fourth "outside" member must hold the PhD degree and may be a member of the Rutgers graduate faculty in a program outside of Bloustein or a faculty member from another university. An individual without an academic appointment (but holding a PhD) may be named as the student's external member with the approval of the doctoral program Director and the Rutgers School of Graduate Studies. In any case, the external member must hold the Ph.D. degree. If the external member is from outside of Rutgers, please submit a copy of their c.v.

Once the dissertation committee is constituted, the student should obtain signatures and submit the Selection of Committee Members form to your Chair and the program director for approval.

#### **M. DISSERTATION PROPOSAL**

Following successful completion of the qualifying examinations, the student prepares a written dissertation proposal in consultation with his or her dissertation chair and dissertation committee. The dissertation proposal sets out the focus of the student's dissertation research, presents a concise problem statement, reviews the relevant literature, describes the research methods to be employed in data collection and analysis, and provides a timetable for undertaking and completing the research in a productive and timely manner.

Except under extremely unusual circumstances, ***the defense of the dissertation proposal must be completed within six months of completing Advanced Scholarly Research.*** It is the student's responsibility to obtain the dissertation committee's approval of the written proposal and to schedule a date and time for a proposal defense. Students should allow sufficient time before the scheduled date of a proposal defense for dissertation committee members to review draft(s) of the proposal and for the student to complete any revisions that might be required by committee members. ***It is expected that faculty will take no longer than 2-3 weeks to review and comment on drafts of the proposal.*** At least **two weeks** before the scheduled defense, the student should notify the Office of Student Services of the date and time of the defense and provide the title and abstract of the proposed dissertation.

The proposal defense proceeds in two parts: (1) an open public lecture presented at the Bloustein School, in which the student describes the substance and method of the proposed research; and (2) an oral defense of the proposal before the student's dissertation committee. Immediately following successful defense of the proposal, the student's dissertation chair, in consultation with the rest of the dissertation committee, provides the student with a written evaluation of the proposal, summarizing the discussion during the oral exam and providing specific recommendations and guidelines for improving the proposed dissertation research. **A copy of the written evaluation is sent to the doctoral program Director and the Office of Student Services.**

**Note:** All doctoral students are expected to attend the public lecture component of proposal defenses that are scheduled from time to time throughout the academic year. Attendance at the proposal lecture is an opportunity to learn how it is done, to support fellow students in the program, and to participate in the intellectual life of the academic community.

## **N. THE DOCTORAL DISSERTATION**

The Ph.D. dissertation makes an original contribution to planning and public policy through the rigorous analytical examination of theory and evidence exploring a significant argument or testing a relevant hypothesis. The dissertation may draw from a broad array of quantitative and/or qualitative research methods, as appropriate to the topic and purpose of the research and reflecting the multidisciplinary nature of the field. Doctoral dissertations presented for defense (*see section M below*) shall be completed to the same standard of substance and format as would a formal research paper submitted to a leading journal for publication. (A list of titles of dissertations completed in the doctoral program in planning and public policy can be found in Appendix 1. All dissertations are available in the Rutgers library and more recent ones on RUCore, Rutgers on-line depository).



## O. DISSERTATION DEFENSE

Upon completion of a complete written draft of the dissertation, and with the approval of the dissertation committee chair, the manuscript is circulated to the members of the dissertation committee for review. The student should allow sufficient time (normally at least three weeks) before the scheduled date of a dissertation defense for committee members to read, review, and comment on the draft dissertation manuscript. Several revisions of the draft dissertation may be required before committee members agree that the dissertation has attained a standard of excellence necessary for the dissertation to be submitted for defense. **Faculty are expected to review and comment on revisions within three weeks.** Unanimous agreement by the dissertation committee is required before the dissertation can be submitted for defense. *It is the student's responsibility to obtain the dissertation committee's approval of the final dissertation manuscript and to schedule a date and time for a proposal defense.*

The oral defense must be scheduled at least one month prior to the date posted by the Rutgers School of Graduate Studies for filing the completed doctoral dissertation.

### **For an October degree:**

August 14	Last day to distribute complete dissertation draft to committee
September 4	Last day for dissertation defense and public lecture
October 1	Last day for filing final dissertation with the Rutgers School of Graduate Studies

### **For a January degree:**

November 30	Last day to distribute complete dissertation draft to committee
December 21	Last day for dissertation defense and public lecture
January 13	Last day for filing final dissertation with the Rutgers School of Graduate Studies

### **For a May degree:**

February 20	Last day to distribute complete dissertation draft to committee
March 16	Last day for dissertation defense and public lecture
April 15	Last day for filing final dissertation with the Rutgers School of Graduate Studies

The degree checklist is available at: <http://gsnb.rutgers.edu/academics/checklist-phd-degree>. This also includes deadline information as **the above filing dates will vary from year-to-year.**

At least two weeks before the scheduled defense, the student should notify the Office of Student Services of the date and time of the defense and provide the title and abstract of the proposed dissertation.

Oral defense of the dissertation consists of two parts. These are:

1. An open public lecture presented at the Bloustein School, in which the student reports the dissertation's objectives, methods, findings, and implications.
2. An oral defense of the dissertation before the dissertation committee.

**Note:** All doctoral students in residence are expected to attend the public lecture component of dissertation defenses that are scheduled from time to time throughout the academic year. Attendance at the dissertation lecture is an opportunity to learn how it is done, to support fellow students in the program, and to participate in the intellectual life of the academic community.

Following the oral defense, the dissertation committee may either approve the dissertation or require additional work to be completed before the final document can be approved. After passing the dissertation defense, the student obtains the signatures of his or her doctoral committee on the dissertation portion of the *Degree Candidacy Form (DCF)* obtained from the Rutgers School of Graduate Studies, indicating that the student has completed all requirements for the degree.

A final copy of the successfully defended dissertation must be submitted to the Rutgers School of Graduate Studies, in the specified format and manner (for detailed information, see the *Electronic Thesis and Dissertation Style Guide*, available from the Rutgers School of Graduate Studies at <http://gsnb.rutgers.edu/guide.php3>). Submission of the dissertation completes the doctoral process.

#### **P. SUSAN FAINSTEIN AWARD**

The Susan Fainstein Award, named after the distinguished scholar and long-term director of the doctoral program, is presented by the Doctoral Program in Planning and Public Policy to students completing doctoral dissertations that exhibit "outstanding scholarship and excellence in doctoral research."

The procedure for selecting candidates for the Fainstein Award is as follows:

1. On March 15<sup>th</sup> of each year, a list of potential eligible doctoral students will be distributed to the doctoral faculty.
2. The doctoral faculty will be invited to nominate candidates for the Award by April 1<sup>st</sup> of each year. The nomination shall include:
  - A letter of nomination, usually written by the nominee's dissertation committee chair.

- Evidence of external indication of superior quality of the dissertation, such as portions of the work accepted for journal publication, etc.
  - An electronic copy of the dissertation.
3. A committee of four doctoral faculty appointed by the doctoral program Director will review the nominations and will recommend, by April 15<sup>th</sup>, whether an award is appropriate.
  4. The committee's decision will be reported at the final Spring semester meeting of the doctoral faculty (usually held in late April or early May) and at the Bloustein School's Spring commencement.

**Q. PROGRAM EVALUATION AND ASSESSMENT**

The Rutgers School of Graduate Studies assesses and evaluates all doctoral programs on a regular basis. This is done to ensure that each program adheres to the high standards required of the Rutgers School of Graduate Studies. As such, we are required to report to the Rutgers School of Graduate Studies various data on your scholarly progress. These metrics encompass detail on awards, fellowships, grants, conference or workshop presentations, publications, and other scholarly activity each doctoral student and candidate achieves during that academic year. Each spring semester, the doctoral program director or the Bloustein School assessment coordinator will send the questionnaire, completion of which is mandatory, in late April to all students and candidates at their email account on file.

## APPENDIX 1. ADVANCED METHODS AND RESEARCH DESIGN COURSES AT RUTGERS AND PRINCETON

### I. QUALITATIVE METHODS COURSES

#### A. RUTGERS COURSES

##### Bloustein School of Planning and Public Policy

**34:970:750 Case Study Methods.** Concepts and methods of case study analysis, illustrated by exemplary methods in the classic and contemporary literature.

##### Anthropology

**16:070:506 Research Design and Methods in Social/Cultural Anthropology.** Survey and critical evaluation of methods in current anthropology, using original research as data.

**16:070:526 Urban Ethnography.** Classic and contemporary urban ethnographies of the US and elsewhere. Urban methods, construction of “the field,” and epistemological concerns. Modernity and global cities. Space, race, and class. Representations of urbanism.

**16:070:527 The Ethnology of Inequality: Race, Class, and Ethnicity.** Survey of anthropological literature on the relationships among race, class, and ethnicity. Ethnographic methods and the comparative approach to the study of hegemony, resistance, and conflict among groups defined as “racial” or “ethnic.”

**16:070:532 Problems in Ethnography.** For graduate students wishing to pursue advanced work in areas not provided for in formal courses. Conferences, reading, and empirical work arranged in consultation with the professor.

**16:070:580 Research Methods and Theory in Archaeology.** Conceptual bases and assumptions used in the formulation of research designs and the interpretation of research results; examination of fieldwork problems and techniques, with emphasis on the problems of observation, use of documentary sources, surveying and excavation, and use of quantitative data.

##### Communication, Information, and Library Studies

**16:194:603 Qualitative Research Methods.** Qualitative approaches for examining information processes, including information definition, acquisition, evaluation, and use.

##### Public Affairs and Administration (Rutgers-Newark)

**Qualitative Methods II.** The purpose of this course is to give doctoral students a more in-depth understanding of the various ways to gather qualitative data. Differs from Qualitative Methods I in that it will be a seminar where students read intensively about, and examine examples of, individual data gathering techniques. These focused readings are coupled with a lab experience

in which students implement their protocols. Ethical considerations in analyzing qualitative data are also discussed.

### **Social Work**

**16:910:640 Qualitative Research Methods.** Examination of the methods of collecting, analyzing, presenting, and applying qualitative data. History and evolution of qualitative research methods; theoretical observations; data-collection methods, including ethnography, participant observation, in-depth interviewing, focus groups, and archival analysis; methods of data analysis; and research applications, including theory development and program design and evaluation.

### **Sociology**

**16:920:501, 502 Sociological Research Methods I, II.** Logic, design, and implementation of research to test sociological hypotheses. First term: fundamentals of research design, sampling, and measurement. Second term: data collection, data management, and exploratory data analysis, including an introduction to computer techniques. Laboratory exercises required.

**16:920:520 Comparative and Historical Methods.** Philosophical, theoretical, and methodological issues involved in sociological explanations of social systems over time.

**16:920:615 Seminar in Qualitative Research Methods.** Discussion and guided practice in the collection and analysis of qualitative data. Major attention on research designs employing participant observations and/or in-depth interviewing. Case studies reviewed; collection and analysis of data from a field research study.

### **Women and Gender Studies**

**16:988:603 Feminist Knowledge Production.** This course is an introduction to many of the methods used in feminist interdisciplinary research. The course looks at how to formulate a research question, collect data, interpret and analyze evidence, and report research results. This methodological overview raises broader issues about the relationship among theory, methods, and research goals. Do certain research problems impose methodological restrictions? Does reliance on some methods rather than others limit what we can know? The course will be a forum to apply knowledge of methods and methodologies to students' own research and research-activist interests.

### **Graduate School of Applied and Professional Psychology**

**18:820:616 Qualitative Research Methods.** Provides an overview of the broad range of qualitative research methods that are available, from traditional coding of narrative information into quantitative categories, to pragmatic case studies, to ethnographic methods, to hermeneutic studies. The course provides an opportunity to practice qualitative research skills by designing, conducting, and writing systematic, semistructured narratives.

### **Graduate School of Education**

**15:310:536 Methods of Educational Ethnography.** This course is an introduction to doing and thinking about educational ethnography. Ethnography is the study of culture and social organization through fieldwork. Students will learn ethnographic methods by doing them. Prerequisites: Sociology or Anthropology of Education, an introductory course in qualitative methods, or permission of the instructor.

## B. PRINCETON COURSES

### Sociology and Population Research

**Soc 553 The Nuts and Bolts of Ethnographic Research.** Several facts inspire this course: (a) ethnographic methods can play a vital role in the development and testing of sociological theory; (b) they are also increasingly relevant to policy-directed research and evaluation; (c) ethnographers have long connected the world of academia with the general public; (d) top publications and bestsellers in the social sciences typically depend on ethnographic research; and (e) a combination of qualitative and quantitative methods improves the quality of findings and interpretation.

### Woodrow Wilson School of Public and International Affairs

**520 Historical Methods and Public Policy.** The seminar will introduce students to the approach of historians who tackle contemporary policy issues. The historical approach is particularly well suited to particular challenges, such as uncovering long-term patterns in government institutions that are likely to shape policy outcomes or evaluation policies during the implementation process. After completing this seminar, students will have a much stronger understanding of the historical development of many issues that they will deal with professionally and will master a new analytic tool that they will be able to use in their work.

## II. QUANTITATIVE METHODS COURSES

### A. RUTGERS COURSES

#### Bloustein School of Planning and Public Policy

**34:970:527 Advanced Multivariate Methods.** Multivariate statistical methods used to analyze land-use, environmental, public health, and other large data sets.

**34:833:530 Research Design and Data Analysis for Public Policy.** Scientific method of study, the processes of conceptualization and measurement, and experimental design, or how social programs are structured so they may be effectively studied.

**34:970:591 Introduction to Geographic Information Science for Urban Planners.** Introduces basic concepts of geographic information science and its computer applications. **Pre- or corequisite: 34:970:515 or 516 or equivalent.**

**34:970:592 Topics in Geographic Information Science.** Includes advanced geographic information science (GIS) topics, spatial statistics, and specialized computer applications. **Pre- or corequisite: 34:970:591.**

**34:970:594 Program Evaluation: Process and Impact.** Focus on program evaluation as the procedures and techniques used to scientifically document the implications of professional interventions. Study of conceptual, measurement, and analytic tools including intervention activities and objectives, intervention monitoring, measurement, design of monitoring and social experiments, and impact analysis.

**34:833:632 Cost-Benefit Analysis.** Introduction to and issues in using cost-benefit analysis. Identify costs and benefits, and understand discounting, dealing with uncertainty, and valuing health and human life.

**34:833:635 Survey Research.** How to conduct, analyze, and evaluate surveys. Topics covered include problem formation, sample design and selection, questionnaire wording and layout, modes of survey administration, field procedures, data reduction, and data analysis.

**34:833:679 Advanced Quantitative Methods.** Presents a variety of advanced econometric theories and applies them to estimate the impact of policies and laws. The course's capstone experience is the completion of a "peer review" style research paper on a question of interest to the student.

### Computer Science

**01:198:424 Modeling and Simulation of Continuous Systems.** To concentrate on the formation and derivation of mathematical models of continuous dynamical systems and to analyze their simulation by means of analog and digital computers. Definition of continuous and discrete systems. Differential equations and their role in modeling. Numerical models, integration algorithms, the CSMP language, error propagation. Examples of continuous and discrete dynamic processes in physics, environment, urban studies, genetics, engineering, and industrial dynamics.

### Economics

**16:220:506 Advanced Economic Statistics.** Background in statistical inferential procedures used in economic-data analysis. Probability, random variables and distributions, estimations, testing hypotheses, and sampling distribution of estimators. Prerequisites: background in calculus and linear algebra.

**16:220:507 Econometrics I.** Focus on measurement of economic parameters. Statistical estimation and inference of regression equation models. Properties of OLS, GLS, JGLS, 2SLS, 3SLS, and Maximum Likelihood Estimators. Introduction to time-series analysis and quantitative-response models. Use of linear algebra and statistical packages. Prerequisites: 16:220:506 or equivalent.

**16:220:508 Econometrics II.** Time series analysis. Specification, estimation and inference. Continuous and discrete data. Multivariate and univariate methods including (V)ARMA models, cointegration, unit roots, predictive inference, bootstrap methods, and financial econometric methods. Prerequisite: 16:220:507.

**16:220:613 Seminar in Applied Econometrics.** Applied work in macroeconometrics and micro-econometrics; use of data and standard statistical packages.

### Industrial and Systems Engineering

**16:540:530 Forecasting and Time Series Analysis.** Alternative time-series models for purposes of prediction. Smoothing techniques, probability and regression analysis, and econometric analysis. Prerequisites: Advanced calculus, statistics.

**16:540:530 Simulation of Production Systems.** Discrete event simulation applied to problems in production, transportation, computing and health care systems. ARENA simulation tool is

utilized. Input/output analysis, verification and validation are emphasized. Interval estimates, variance reduction techniques, and statistics. Prerequisites: 14:540:311; 01:640:477 or 01:960:379; 01:960:381, 382 or equivalent; and FORTRAN or C.

### **Political Science**

**16:790:595 Advanced Survey Research.** Sample design, questionnaire construction, interviewer training and evaluation, analysis of survey data, and preparation of proposals for potential users.

**16:790:633 Multivariate Techniques.** Focus on multiple regression but also may include categorical regression, factor analysis, causal modeling, and analysis of variance. Heavy emphasis on computer applications.

**16:790:634 Game Theory for Political Scientists.** Introductory course in game theory for political science graduate students.

### **Social Work**

**16:910:638 Advanced Statistical Methods I.** Analytic and measurement strategies fundamental to multivariate model testing in policy, administration, and direct practice research. Topics include tabular and loglinear analysis, multiple regression, analysis of covariance, and analysis of variance in its principal forms. Multiple indicators and measurement approaches such as exploratory and confirmatory factor analysis. Prerequisite: 16:910:637.

**16:910:639 Advanced Statistical Methods II.** Use of multivariate quantitative methods. Employing multiple dependent variables, nonlinear relationships, mediator effects, instrument variables, and multilevel analysis. Prerequisite: 16:910:638.

### **Sociology**

**16:920:541-542 Analysis of Sociological Data I, II.** Application of classical and modern statistical techniques to the analysis of sociological data. Problems of optimal fitting of technique to level and quality of data emphasized. First term: bivariate techniques, up to and including analysis of variance. Second term: multivariate techniques, multiple regression, and the general linear model. Laboratory exercises required. Prerequisite for 16:920:542; 16:920:541 or permission of the instructor.

**16:920:633 Seminar in Social Science Data Analysis.** Advanced topics in quantitative reduction and analysis of data generated by research in the various social sciences. Topics chosen from, but not limited to, loglinear analysis, structural equation models, panel analysis, network analysis, time-series analysis, and continuous-time process models. Initial sessions focus on developing the basics of matrix algebra upon which most of these techniques rely. Prerequisite: 16:920:542 or permission of the instructor.

### **Statistics**

**16:960:582 Introduction to Methods and Theory of Probability.** Emphasis on methods and problem solving. Topics include probability spaces, basic distributions, random variables, expectations, distribution functions, conditional probability and independence, sampling distributions. Prerequisite: one year of calculus.

**16:960:583 Methods of Inference.** Theory of point and interval estimation and hypothesis testing. Topics include sufficiency, unbiasedness, and power functions. Emphasis on application of the theory in the development of statistical procedures. Prerequisite: 16:960:582.

**16:960:565 Applied Time Series Analysis.** Model-based forecasting methods, autoregressive and moving average models, ARIMA, ARMAX, ARCH, state-space models, estimation, forecasting and model validation, missing data, irregularly spaced time series, parametric and nonparametric bootstrap methods for time series, multiresolution analysis of spatial and time-series signals, time-varying models and wavelets.

**16:960:542 Life Data Analysis.** Statistical methodology for survival and reliability data. Topics include life-table techniques, competing risk analysis; parametric and nonparametric inferences of lifetime distributions; regressions and censored data; Poisson and renewal processes; multistate survival models and goodness-of-fit test. Statistical software used. Prerequisite: one year of calculus, Level V statistics, or permission of the instructor.

**16:960:553 Categorical Data Analysis.** Two-by-two frequency tables, Fisher's exact test, measures of association, general contingency tables, loglinear models, logistic regression, repeated categorical-response data, maximum likelihood estimation, tables with ordered categories, discriminant analysis. Prerequisite: Level V statistics or permission of the instructor.

**16:960:587 Interpretation of Data II.** Modern methods of data analysis and advanced statistical computing techniques: smooth regression (including GAM models), nonlinear models, Monte-Carlo simulation methods, the EM algorithm, MCMC methods, spatial statistics, longitudinal data analysis/mixed effects models/GEE, latent variable models, hidden Markov models, Bayesian methods, etc. Prerequisite: 16:960:586 or permission of the instructor.

## **B. PRINCETON COURSES**

### **Woodrow Wilson School of Public and International Affairs**

**508b Econometrics and Public Policy: Basic.** Provides a thorough examination of statistical methods employed in public policy analysis, with a particular emphasis on regression methods which are frequently employed in research across the social sciences. This course emphasizes intuitive understanding of the central concepts and develops in students the ability to choose and employ the appropriate tool for a particular research problem and understand the limitations of the techniques. Prerequisite: 507b.

**508c Econometrics and Public Policy: Advanced.** Discusses the main tools of econometric analysis and the way in which they are applied to a range of problems in social science. Emphasis is on using techniques and on understanding and critically assessing others' use of them. Topics include regression analysis with a focus on regression as a tool for analyzing non-experimental data, discrete choice, and an introduction to time-series analysis. Applications from macroeconomics, policy evaluation, and economic development. Prerequisite: grounding in topics covered in 507c.

**509 Generalized Linear Statistical Models.** Focuses primarily on the analysis of survey data using generalized linear statistical models. The course starts with a review of linear models for

continuous responses and then proceeds to consider logistic regression models for binary data, log-linear models for count data including rates and contingency tables and hazard models for duration data. Attention is paid to the logical and mathematical foundations of the techniques but the main emphasis is on the applications, including computer usage. Assumes prior exposure to statistics at the level of 507c or higher and familiarity with matrix algebra and calculus. Prerequisite: 507c.

**515b Program and Policy Evaluation.** This course introduces students to evaluation. It explores ways to develop and implement research-based program improvement strategies and program accountability systems; to judge the effects of policies and programs; and to assess the benefits and costs of policy of program changes. Students study a wide range of evaluation tools; read and discuss evaluation examples and apply this knowledge by designing several different types of evaluation on programs of their choosing. Prerequisite: 507b/c or instructor's permission.

## C. THEORY COURSES

### Women and Gender Studies

**16:988:602 Feminist Methodologies.** This course focuses on both the advantages and disadvantages of different philosophical, methodological, theoretical, and disciplinary traditions for contributing to our knowledge of central issues in Women's and Gender Studies. The goal is to provide students with the critical tools to utilize and interrogate existing methodologies and to adapt them to the enterprise of feminist research. What counts as authoritative knowledge? What defines good research and bad research? What is the role of the social in the constitution of knowledge? The aim will be to understand the implications for feminist research of different philosophies of science, including positivism, realism, pragmatism, idealism, postmodernism, and others. We also consider the development of feminist hybrid epistemologies such as strong objectivity, situated knowledge, and a genial realism.

### Graduate School of Education

**15:255:500 Foundations of Inquiry.** Provides a broad conception of disciplined inquiry. Enables students to locate various methods and general issues in research within a broader perspective; epistemology, history, and philosophy of science and social science, logic, introduction to the logic of specific methods, contemporary issues in social science, and research ethics. Required of all doctoral students in the School of Education.

## D. OTHER QUANTITATIVE METHODS COURSES AT RUTGERS

### Geospatial Information Sciences

34:970:650	Planning Support Systems
16:450:615	Seminar in Remote Sensing
16:450:605	Land Change Science
16:450:617	Seminar in Remote Sensing of the Biosphere
16:455:501	Seminar in Geospatial Information Science
16:194:601	Information and Communication Processes
16:198:535	Pattern Recognition and Theory
16:198:541	Database Systems
22:198:603	Database Systems

16:332:484 Introduction to Computer Graphics  
16:375:551 Remote Sensing of the Ocean and Atmosphere  
16:712:615 Geophysical Data Analysis  
17:610:557 Database Design and Management

**Environmental Planning and Policy**

16:375:501 Environmental Science Analysis  
11:375:625 Life-Cycle Assessment Tools  
16:127:507 Environmental Systems Analysis  
16:198:510 Numerical Analysis  
16:332:505 Control System Theory  
16:220:549 Experimental Economics  
16:711:613 Simulation

## APPENDIX 2. DOCTORAL QUALIFYING EXAMS: COMPONENTS, TIMING, AND PREPARATION

### A. QUALIFYING EXAM OVERVIEW

Qualifying examinations assess the student's mastery of the concepts, approaches, and literature relevant to planning and public policy in general and to each student's particular research field or topic. Qualifying examinations certify that the student is "qualified" to transition from coursework to independent dissertation research. Passing the qualifying examinations constitutes formal advancement to candidacy for the Ph.D. degree.

Preparation for qualifying exams normally involves constructing reading lists and attaining familiarity with the extant literature in several fields. The exams provide an opportunity for the student to devote structured time to achieve deep familiarity with the state of knowledge in his or her field of study. It may be useful to think of qualifying exams as a means to undertake an intensive program of reading in a disciplined, efficient, and productive manner, providing a strong foundation in the literature in one's chosen field.

### B. REQUIRED EXAMINATIONS

Doctoral students in Planning and Public Policy are required to pass written and oral qualifying examinations in the following four areas:

1. **Theory:** of and in planning and public policy.
2. **Methods:** including core competency in qualitative and quantitative analysis and research design.
3. **First Field:** a topical specialization within planning and/or public policy, requiring broad and deep familiarity with a substantive literature that is central to the student's anticipated dissertation research.
4. **Second Field:** a second topical or substantive specialization closely related to the student's anticipated dissertation research and defined so that the subject matter does not overlap with the First Field; or a related field other than planning and public policy (e.g., civil engineering, computer science, economics, geography, political science, sociology, or another field) that the student can show is relevant to his or her dissertation research.

## C. SCHEDULING EXAMS

Students are encouraged to take their qualifying exams as soon as they are eligible to do so.

### Methods Exam

The Methods examination may be taken in any semester after the student has completed the two required core-competency methods classes:

(628) Advanced Qualitative Methods

(630) Discrete Choice Methods

**Note:** The required (third) advanced methods course may be taken either before or after the student passes the Methods qualifying exam, as guided by the student's dissertation research direction and interests and by the availability of relevant courses.

The doctoral program offers the Methods qualifying examination twice a year, once in the Fall semester and once in the Spring semester, on a date set by the Methods examiner(s) and announced in advance. The oral portion of the Methods exam usually occurs one or two weeks following the written exam.

*Students wishing to take the Methods exam should notify the Methods examiner(s) or the doctoral program Director the semester before the desired exam date regarding their intention to take the exam the following semester.* The student will then be put on a list to receive information regarding the date, time, and place of the exam; guidelines for exam format and/or preparation; and other essential information that may become available.

### Theory, First Field, and Second Field Exams

The student must complete written and oral examinations in Theory, First Field, and Second Field within a single semester.

To take qualifying examinations in Theory, First Field, and Second Field, students must have or be taking:

1. 48 credits of coursework (including up to 24 transfer credits)
2. Have a minimum cumulative GPA of 3.5
3. Have NO outstanding Incomplete (IN) grades

The doctoral program offers the qualifying examination in Theory twice a year, once in the Fall semester and once in the Spring semester, on a date set by the Theory examiner(s) and announced in advance.

*Each student is responsible for selecting examiners to administer his or her qualifying exams in Theory, First Field, and Second Field.* Students can select as examiners any three members of the graduate faculty in the Bloustein School with knowledge or specialization in the subject matter of the exam. No faculty member may administer more than one

exam for the same student, although follow-up or repeat versions of the same exam are allowable when necessary and appropriate.

At least one semester (and preferably more) before intending to take Theory, First Field, and Second Field exams, and in consultation with the faculty advisor and the doctoral program Director, the student should initiate conversations with his or her selected faculty examiners to determine the subject matter, format, and date for the three exams. Each Field exam should include relevant theory for the subject at hand. The format and substantive focus the First and Second Field exams are decided by mutual agreement between the student and the respective faculty examiners selected by the student to administer the three exams. To repeat, *the written and oral portions of the Theory, First Field, and Second Field exams must all be completed within a single semester.*

### **Oral Exams**

All four qualifying exams contain both oral and written components. Oral exams provide an opportunity for follow-up discussion and/or clarification of questions posed in the written exams; for discussion of the direction, nature, and content of the student's proposed dissertation research; and for any other matters chosen by the examiners.

**Methods.** The oral component of the Methods exam is arranged by the Methods examiner(s) and is scheduled to follow the written Methods exam in a timely manner, usually within a few weeks.

**Theory, First Field, Second Field.** A single combined oral exam covering Theory and First and Second Fields must be completed within the same semester as the three written exams. *It is the student's responsibility to arrange a date and time for the combined oral exam that are agreed to by all three examiners.* This process should be initiated as early as possible, certainly as soon as the dates of the written exams have been decided, to accommodate work schedules of faculty who are often asked to schedule multiple exams in the same semester.

## **D. PREPARING FOR QUALIFYING EXAMS**

This section contains detailed information and recommended reading lists, for preparing for qualifying exams. These guidelines are subject to change and may vary for specific exams. *It is the student's responsibility to maintain frequent contact with examiners, the doctoral program Director, and the Office of Student Services for current information on procedures, content, scheduling, and other matters regarding qualifying exams.* Students should familiarize themselves with the separate instructions below for each of the four qualifying exams.

### **METHODS EXAM**

The qualifying exam in Methods assesses core competency in qualitative and quantitative research methods and research design. The Methods exam covers topics that are essential to the conduct of dissertation research and that an individual holding a Ph.D. in planning and public policy are expected to know.

**Exam Preparation.** We suggest that you prepare for the Methods exam by doing the following:

1. Take some or all of the following introductory-level quantitative methods courses or, if you believe that you already have a thorough grounding in the material, acquire their syllabi and reading lists and review the material covered in the course:
  - 970:515      Methods of Planning Analysis I
  - 833:530      Methods I-Research Design
  - 833:630      Methods II-Data Analysis
2. Take the required doctoral courses in qualitative and quantitative methods:
  - 833:628      Advanced Qualitative Methods
  - 970:630      Discrete Choice Methods
3. Prepare a reading list that covers the concepts taught in these courses as well as any additional methods you are likely to use in your dissertation research. Make sure you are familiar with the material covered in your reading list. Suggested lists of qualitative and quantitative methods topics and readings are provided below.
4. Practice defining concepts and succinctly discussing their relevance (e.g., “What is an ANOVA test and under what circumstances is it used?”) Also practice comparing concepts and commenting on the appropriateness of alternative methods (e.g., clustered vs. stratified sampling; t-distribution vs. normal curve; logit model vs. linear regression). Finally, prepare to discuss “big picture” issues of structuring a research study in a longer essay covering research design, sampling, variable measurement, and data analysis.
5. Study in groups—it’s more fun and more productive. Contact other members of your exam cohort to set up a study group well in advance of your anticipated exam date.
6. Give yourself a timed practice exam. Prior year exams are posted on the PhD Cohort site on Sakai and are available from the Bloustein School’s Office of Student Services.

**Exam Format and Administration.** The written portion of the Methods exam is in two parts, followed by an oral exam:

Part 1. Short answers covering quantitative and qualitative methods. Answer 11 out of 12 quantitative questions and 7 of 8 qualitative questions. Exam is closed book, handwritten in blue exam books. You will be expected to understand and be able to define basic formulas, concepts, and methodological tools.

(Lunch break)

**Part 2.** Longer essay that proposes a research plan for a study. The essay should address research design, sampling strategy, data collection strategy, and strategy for analyzing data. You must answer 1 of 2 or 3 questions, handwritten or typed, within the specified time limit.

**Oral exam.** The oral portion of the Methods exam is administered several weeks after the written exam and normally takes 30 to 60 minutes per student. Examiners use the oral portion of the exam to ask questions designed to clarify or expand on the student's responses to the written exam.

**Topics and Readings for Quantitative Methods.** The following topics and suggested readings are likely to be covered in the quantitative portion of the Methods exam.

### 1. Design

- Designs that help establish causality
- Concepts of internal and external validity
- Concept of counterfactual
- Kinds of experimental and quasi-experimental designs
- Advantages and disadvantages of above designs

**Recommended readings:** Rossi, Lipsey, and Freeman, 2004; Shadish, Cook, and Campbell, 2001.

### 2. Measurement and Data Collection

- Concepts of reliability and validity
- Types of reliability and validity
- Relationship between reliability and validity
- Data collection methods
- Survey research

**Recommended readings:** Babbie and Rubin, 2010; Dillman, 2008; [www.aapor.org](http://www.aapor.org).

### 3. Sampling

- Types of sampling schemes
- Types of random sampling schemes
- Types of non-random sampling schemes
- Advantages and disadvantages of sampling schemes

**Recommended readings:** Babbie and Rubin, 2010; Lipsey, 1990; Kish, 1995.

### 4. Statistical Analysis

- Descriptive statistics
- Inferential statistics (Z, t, F-tests, Chi-square test)
- Regression methods (regression assumptions, OLS, panel regression, instrumental variables regression, binary independent variable [Logit/Probit], multiple category dependent variable [Multinomial Logit/Ordered Logit/Ordered Probit])
- Other multivariate (data reduction) methods (factor analysis, cluster analysis, discriminant analysis)
- Statistical versus substantive significance

**Recommended readings:** Aldenderfer and Blashfield, 1984; Berry and Feldman, 1985; Healey, 2004; Kachigan, 1991; Kennedy, 2003; Kim and Mueller, 1978; Lewis-Beck, 1980; Liao, 1994; Long, 1997; Stock and Watson, 2007.

### **Recommended Readings in Quantitative Methods**

- Aldenderfer, M. and Blashfield, R. 1984. *Cluster Analysis*. Sage.
- Babbie, E. and Rubin, A. 2010. *Research Methods for Social Work*. Brooks Cole.
- Berry, W. and Feldman, S. 1985. *Multiple Regression in Practice*. Sage.
- Healey, J. 2004. *Statistics: A Tool for Social Research*. Wadsworth.
- Kachigan, S. 1991. *Multivariate Statistical Analysis*. Radius Press.
- Kennedy, P. 2003. *A Guide to Econometrics*. MIT Press.
- Kim, J. and Mueller, C. 1978. *Factor Analysis*. Sage.
- Kish, L. 1995. *Survey Sampling*. Wiley.
- Lewis-Beck, M. 1980. *Applied Regression: An Introduction*. Sage.
- Liao, T. 1994. *Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models*. Sage.
- Lipsey, M. 1990. *Design Sensitivity: Statistical Power for Experimental Research*. Sage.
- Long, S. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Sage.
- Rossi, P., Lipsey, M., and Freeman, H. 2004. *Evaluation: A Systematic Approach*. Sage (ch. 7-10).
- Shadish, W., Cook, T., and Campbell, D. 2001. *Experimental and Quasi-Experimental Design for Generalized Causal Inference*. Wadsworth.
- Stock, J. and Watson, M. 2007. *Introduction to Econometrics*. Addison Wesley.

**Topics and Readings for Qualitative Methods.** The following topics and suggested readings are likely to be covered in the qualitative portion of the Methods exam.

#### **Research Design**

Marshall, C. and Rossman, G. 1999. *Designing Qualitative Research*. 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> ed. Sage.

#### **Interviewing**

Rubin, H. and Rubin, I. 2004. *Qualitative Interviewing: The Art of Hearing Data*. 2<sup>nd</sup> ed. Sage.

#### **Focus Groups**

Morgan, D. 1997. *Focus Groups as Qualitative Research*. Sage.

Morgan, D. 1993. *Successful Focus Groups: Advancing the State of the Art*.

B. Crabtree, et al. "Selecting individual or group interviews," pp. 137-149.

R. Zeller, "Focus group research on sensitive topics: setting the agenda without setting the agenda," pp. 167-183.

*Illustration:* Kline, Kline, and Oken. 1992. "Minority women and sexual choice in the age of AIDS. *Social Science and Medicine* 34: 447-457.

*Illustration:* Shively. 1992. "Cowboys and Indians: Perceptions of western films among American Indians and Anglos. *American Sociological Review* 57: 725-734.

#### **Other Data Collection Techniques**

Denzin, N. and Lincoln, Y., eds. 1988. *Collecting and Interpreting Qualitative Materials*. Sage. Chapter 4. Ian Hodder, "The interpretation of documents and material culture."

- Chapter 5. Douglas Harper, "On the authority of the image."  
 Chapter 6. D. J. Clandinin and F. M. Connelly, "Personal experience methods."  
 Denzin, N. and Lincoln, Y. eds. 1998. *Strategies of Qualitative Inquiry*. Sage.  
 Chapter 8. L.M. Smith, "Biographical method."  
 Chapter 9. Gaye Tuchman, "Historical social science."  
 Creswell, J. 1997. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage, pp. 47-51.  
*Illustration:* Lopez, E., Eng, E., Randall-David, E., and Robinson, N. 2005. "Quality-of-life concerns of African American breast cancer survivors within rural North Carolina: Blending the techniques of photovoice and grounded theory." *Qualitative Health Research* 15: 99-115.  
*Illustration:* Angrosino, M. 1997. "On the bus with Vonnie Lee." In Creswell, J., *Qualitative Inquiry and Research Design*. Sage, Appendix B.  
*Illustration:* Luken, P. and Vaughan, S. 2005. "...be a genuine homemaker in your own home:" Gender and familial relations in state housing practices, 1917-1922." *Social Forces* 83: 1603-1626.

### **Observation, Participant Observation, and Ethnography**

- Schensul, S., Schensul, J., and LeCompte, M. 1999. *Essential Ethnographic Methods*. Alta Mira Press, chapter 5, pp. 91-120.  
 Dewalt, K. and Dewalt, B. 2002. *Participant Observation: A Guide for Fieldworkers*. Alta Mira Press, chapters 1-4, pp. 1-82.  
 Fetterman, D. 2009. *Ethnography: Step by Step*. 3<sup>rd</sup> ed. Sage, chapters 1-3, 5, pp. 1-67 and 93-112.  
*Illustration:* Newman, K. 1999. *No Shame in my Game*. Russell Sage Foundation, chapter 1.  
*Illustration:* Newman, K. 2001. "Hard times on 125<sup>th</sup> Street: Harlem's poor confront welfare reform." *American Anthropologist* 103: 762-778.  
*Illustration:* Luhrmann, T. 2004. "Metakinesis: How God becomes intimate in contemporary U.S. Christianity." *American Anthropologist* 106: 518-528.

### **Case Study**

- Creswell, J. 1997. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage, pp. 61-64.  
 Denzin, N. and Lincoln, Y. eds. 1998. *Strategies of Qualitative Inquiry*. Sage, chapter 4.  
 Eisenhardt, K. 1989. "Building theories from case study research." *Academy of Management Review* 14: 532-550.  
 Stake, R. 1995. *The Art of Case Study Research*. chapter 7. "Triangulation."  
*Illustration:* Creswell, J. 1997. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage. Appendix F.  
*Illustration:* Rubin, J. and Stankiewicz, G. 2001. "The Los Angeles Community Development Bank: The possible pitfalls of public-private partnerships." *Journal of Urban Affairs* 23: 133-153.  
*Illustration:* Varady, D., Raffel, J. and Sweeney, S. 2005. "Attracting middle-income families in the HOPE VI public housing revitalization program." *Journal of Urban Affairs* 27: 149-164.  
*Illustration:* Smith, H. and Graves, W. 2005. "Gentrification as corporate growth strategy: The strange case of Charlotte, North Carolina and the Bank of America." *Journal of Urban Affairs* 27: 403-418.

### **Grounded Theory Building**

Strauss, A. and Corbin, J. 1998. *Basics of Qualitative Research*. 2<sup>nd</sup> or 3<sup>rd</sup> ed. Sage.  
 Creswell, J. 1997. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage. Appendix D.

### **Phenomenology, Ethnomethodology, Action Research, and Participatory Action Research**

Denzin, N. and Lincoln, Y. eds. 1998. *Strategies of Qualitative Inquiry*. Sage.  
 Chapter 6. J. Holstein and J. Gubrium, "Phenomenology, ethnomethodology and interpretive practice," pp. 137-150 only.  
 Chapter 10. P. Reason, "Three approaches to participative inquiry."  
 Creswell, J. 1997. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. pp. 51-55.  
 Poore, S. *Ethnomethodology: An Introduction*.  
<http://www.hewett.norfolk.sch.uk/curric/soc/ethno/intro.htm>  
 Wadsworth, Y. 1998. *What is Participatory Action Research?* Action Research International, paper 2.  
*Illustration:* Davis, M., Dias-Bowie, Y., Greenberg, K., Klukken, G., Pollio, H., Thomas, S., and Thompson, C. 2004. "A fly in the buttermilk: Descriptions of university life by successful black undergraduate students at a predominantly white southeastern university." *The Journal of Higher Education* 75: 420-445.  
*Illustration:* Romero Gonzalez, E. et al. 2007. "Participatory action research for environmental health: Encountering Freire in the urban barrio." *Journal of Urban Affairs* 29: 77-100.  
*Illustration:* Cahill, C. 2004. "Defying gravity? Raising consciousness through collective research." *Children's Geographies* 2: 273-286.

## **THEORY EXAM**

*It is the student's responsibility to select an examiner for his or her Theory exam, and you should initiate this process at least one semester (and preferably more) before the semester in which you intend to take the exam.* The student may choose any member of the graduate faculty in the Bloustein School as his or her Theory examiner but the format of the exam is uniform for all students, as described below.

**Exam Format and Preparation.** The written qualifying exam in Theory is a take-home exam consisting of one essay (about 12 pages plus references) completed in a single 8-hour period. Exam questions are distributed via e-mail at approximately 9:00 a.m. on the day of the exam and completed essays must be returned within 8 hours.

The written Theory exam consists of 2-3 questions on the general theory of planning and public policy, planning history, urban and social theory, the policy process, and related themes. All students receive the same 2-3 questions and choose one question to write on.

The oral exam in Theory is combined with and held at the same time as the oral exam in the student's First Field and Second Field (see below). The oral exam provides an opportunity to follow up and clarify material in the written essays and to discuss the student's proposed dissertation research.

**Preparation for the Theory Exam** requires attaining familiarity with the material in the following recommended reading list. This list comprises the basic, foundational literature that should be familiar to anyone receiving a doctoral degree in planning and public policy. All students are expected to have a working knowledge of the readings in all three sections of the following list:

### **Recommended Reading List – Theory Exam Part A**

#### **I. Classics**

- Bentham, Jeremy. 1988. *The Principles of Morals and Legislation*. NY: Prometheus Books.
- Berman, Marshall. 1988. *All That is Solid Melts Into Air: The Experience of Modernity*. NY: Penguin Books.
- de Tocqueville, Alexis. 2004. *Democracy in America*. NY: Library of America.
- Foucault, Michel. 1978 [1991]. "Governmentality." In G. Burchell, C. Gordon and P. Miller, eds. *The Foucault Effect: Studies in Governmentality*. Chicago: University of Chicago Press.
- Gaventa, John. 1980. *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley*. Urbana: University of Illinois Press.
- Hamilton, Madison, and Jay. *The Federalist Papers*. Nos. 1, 10, 15.
- Harden, Garret. 1968. "The tragedy of the commons." *Science* 162: 243-248.
- Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. NY: Vintage Books.
- Kuhn, Thomas. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Lukes, Steven. 1974. *Power*. London: Macmillan.
- Marx, Karl. 1977. *Capital: A Critique of Political Economy*. vol. 1. NY: Vintage Books.
- Mill, John Stuart. 1989. On liberty. In *On Liberty and Other Writings*. Cambridge: Cambridge University Press.
- Mills, C. Wright. 1956. *The Power Elite*. Oxford: Oxford University Press.
- Mumford, Lewis. 1961. *The City in History*. NY: MJF Books.
- Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.
- Park, Robert; Burgess, Ernest; and McKenzie, Roderick. 1925 [1966]. *The City: Suggestions for Investigation of Human Behavior in the Urban Environment*. Chicago: University of Chicago Press.
- Polanyi, Karl. 1957. *The Great Transformation: The Political and Economic Origins of our Time*. Boston: Beacon Press.
- Schumpeter, J. 1950. *Capitalism, Socialism, and Democracy*. NY: Harper Torchbooks.

- Sen, Amartya. 1999. *Development as Freedom*. Oxford: Oxford University Press.
- Simmel, Georg. 1903. "The metropolis and mental life." In Donald Levine, ed. 1971. *Simmel: On Individuality and Social Forms*. Chicago: University of Chicago Press, pp. 324-339.
- Weber, Max. 2004 [1919]. Politics as a vocation. In D. Owen, T. Strong and R. Livingstone, eds. *The Vocation Lectures*. Hackett Publishing.
- Weber, Max. 1946. Science as a vocation. In H. Gerth and C. Wright Mills, eds. *Max Weber: Essays in Sociology*. NY: Oxford University Press.
- Weber, Max. 2002. *The Protestant Ethic and the Spirit of Capitalism*. NY: Penguin Books.
- Williams, Raymond. 1973. *The Country and the City*. NY: Oxford University Press.
- Worth, Louis. 1938. "Urbanism as a way of life." *American Journal of Sociology* 44, 2: 1-24; reprinted in Albert Reiss, Jr., ed. 1964. *Louis Wirth on Cities and Social Life*. Chicago: University of Chicago Press, pp. 60-83.

## II. Public Policy, Politics, and Organizations

- Arrow, Kenneth. 1974. *The Limits of Organization*. NY: Norton.
- Dahl, Robert. 1961. *Who Governs? Democracy and Power in an American City*. New Haven, CT: Yale University Press.
- Fischer, Frank. 2009. *Democracy and Expertise: Reorienting Policy Inquiry*. NY: Oxford University Press.
- Hirschman, Arnold. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press.
- Kingdon, John. 1984. *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown.
- Laswell, Harold. 1971. *A Preview of the Policy Sciences*. NY: American Elsevier.
- Lindbloom, Charles. 1959. "The science of muddling through." *Public Administration Review* 19: 79-88.
- Lipsky, Michael. 1983. *Street Level Bureaucracy*. NY: Russell Sage Foundation.
- Matland, Richard. 1995. "Synthesizing the implementation literature: the ambiguity-conflict model of policy implementation." *Journal of Public Administration Research and Theory* 5: 145-174.
- North, Douglass. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
- O'Connor, Alice. 2001. *Poverty Knowledge: Social Science, Social Policy and the Poor in Twentieth Century U.S. History*. Princeton: Princeton University Press.
- Perrow, Charles. 1986. *Complex Organizations: A Critical Essay*. third ed. NY: McGraw-Hill.
- Piven, Frances F. and Cloward, Richard. 1971. *Regulating the Poor: The Functions of Public Welfare*. NY: Vintage Books.
- Sabatier, Paul. 1995. "Top-down and bottom-up approaches to implementation research: a critical analysis and suggested synthesis." *Journal of Public Policy* 6: 21-48.
- Scott, James. 1998. *Seeing Like a State*. New Haven, CT: Yale University Press.
- Wilson, James Q. 2000. *Bureaucracy*. NY: Basic Books.

## III. Planning Theory

- Boyer, Christine. 1986. *Dreaming the Rational City: The Myth of American City Planning*. Cambridge, MA: MIT Press.

- Campbell, Scott and Fainstein, Susan. eds. 2012. *Readings in Planning Theory*. 3<sup>rd</sup> edition. Oxford: Blackwell.
- Clavel, Pierre. 1986. *The Progressive City: Planning and Participation, 1969-1984*. New Brunswick, NJ: Rutgers University Press.
- Fainstein, Susan and Campbell, Scott. eds. 2011. *Readings in Urban Theory*. 3<sup>rd</sup> edition. Oxford: Blackwell.
- Fischer, Frank and Forester, John. eds. 1993. *The Argumentative Turn in Policy Analysis and Planning*. Durham, NC: Duke University Press.
- Flyvbjerg, Bent. 1998. *Rationality and Power*. Chicago: University of Chicago Press.
- Flyvbjerg, Bent. 2001. *Making Social Science Matter*. Cambridge: Cambridge University Press.
- Fogelson, Richard. 1986. *Planning the Capitalist City*. Princeton: Princeton University Press.
- Forester, John. 1989. *Planning in the Face of Power*. Berkeley: Univ of California Press.
- Friedmann, John. 1987. *Planning in the Public Domain: From Knowledge to Action*. Princeton: Princeton University Press.
- Harvey, David. 1989. *The Urban Experience*. Baltimore: Johns Hopkins University Press..
- Healey, Patsy. 2006. *Collaborative Planning: Shaping Places in Fragmented Societies*. 2<sup>nd</sup> edition. NY: Palgrave Macmillan.
- Hoch, Charles. 1994. *What Planners Do: Power, Politics and Persuasion*. Chicago: American Planning Association.
- Lefebvre, Henri. 2003. *The Urban Revolution*. Minneapolis: University of Minnesota Press.
- Logan, John and Molotch, Harvey. 1987. *Urban Fortunes: The Political Economy of Place*. Berkeley: University of California Press.
- Schon, Donald. 1983. *The Reflective Practitioner: How Professionals Think in Action*. NY: Basic Books.
- Sugrue, Thomas. 2005. *The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit*. Princeton, NJ: Princeton University Press.
- Young, Iris. 1990. *Justice and the Politics of Difference*. Princeton: Princeton University Press.

### **FIRST AND SECOND FIELD EXAMS**

First and Second Field exams review the literature addressing substantive topics or subtopics relevant to the student's anticipated dissertation research. No hierarchical difference in importance between the two exams is implied despite their designation as "first" and "second" fields.

***Exam Format and Preparation.*** Each student is responsible for selecting his or her examiners for First Field and Second Field exams from among the members of the Bloustein School's graduate faculty. Preparation for First and Second Field exams follows a similar process and timeframe as for Part B of the Theory exam:

1. At least one semester before your intended exam date, meet with your selected examiners and obtain their agreement to serve. Discuss the substantive or topical focus of your First and Second Fields.

2. Prepare a separate reading list for each exam. The length, breadth, and complexity of your reading lists are governed by the nature of the topics or subtopics you have selected. These should include theoretical aspects of your selected subject area.
3. Read and become familiar with the material on your reading lists. Remember that your reading is in preparation for your dissertation and not simply a means to pass an exam.
4. Discuss the format of your exams with your examiners. Given the wide diversity of topics and students, there is no fixed format for First and Second Field exams. Past exams have taken the form of 5-10 page essays on pre-set questions; a longer (c. 20 page) synthesis of the literature; an article-length discussion of empirical research; and other formats as agreed to by the student and the examiner.
5. Contact your examiners to schedule a date for the combined oral exam in Theory and First and Second Fields. This should be done as early as possible to avoid time conflicts and accommodate busy schedules. Remember that the three written exams and the combined orals must be completed within a single semester.

#### **E. FORMS AND REPORTING REQUIREMENTS**

1. As soon as you have identified examiners, topics, and dates for your Theory, Major Field, and Minor Field exams, send this information in an e-mail to the Office of Student Services with a copy to the doctoral program Director.
2. Obtain a copy of the Degree Candidacy Form issued by the Rutgers School of Graduate Studies and available from the Office of Student Services. Complete page one of this form and bring it to your oral exams for signature by your examiners.