האוניברסיטה העברית בירושלים
The Hebrew University of Jerusalem

Department of Statistics

The Self-Evaluation Report

December 2009

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1 The Institution

1.1 A brief summary describing the institution and its development since its establishment, including details of the campus(es) where the institution's teaching activities take place (number and location), names of the faculties /schools/departments in the institution, the over-all number of students studying towards academic degrees in the institution according to faculty and degree (first degree, second degree with thesis, second degree without thesis, doctoral degree), the date of recognition by the Council for Higher Education.

The proposal to establish a Jewish institution for higher education was first raised as far back as 1882, yet the cornerstone of the Hebrew University was only laid in Jerusalem in 1918. On April 1, 1925, the University was officially opened on Mount Scopus. The academic life of the University (courses and research) took place on Mount Scopus until 1948, the year of the establishment of the State of Israel. During the War of Independence, the road to Mount Scopus was blocked and the University was forced into exile; it continued its activities thereafter in rented facilities scattered throughout various parts of Jerusalem. In 1955, the government of Israel allocated land in the Givat Ram neighborhood for a new Hebrew University campus. In 1967, the road to Mount Scopus was reopened, and in the early 1970s, academic activities were restored on the Mount Scopus campus. This campus is named after Edmund J. Safra

The University has since continued to grow, with the addition of new buildings, the establishment of new programs, and the recruitment of outstanding scholars, researchers and students, fulfilling its commitment to excellence.

The Hebrew University in Jerusalem was accredited as an institution of higher education by the President of Israel, Mr. Itzhak Ben-Zvi, in accordance with the Law of the Council of Higher Education, 1958, on the 23rd of August 1962.

The Hebrew University operates on five campuses:

- Mount Scopus campus, site of the Faculty of Humanities and the School of Education, the Faculty of Social Sciences, the School of Business Administration, the Faculty of Law and the Institute of Criminology, the School of Occupational Therapy, the Paul Baerwald School of Social Work and Social Welfare, the Truman Institute for the Advancement of Peace, the Center for Pre-Academic Studies, the Rothberg International School, and the Buber Center for Adult Education.
- Edmund J. Safra campus, site of the Faculty of Mathematics and Natural Sciences, The Rachel and Selim Benin School of Engineering and Computer Sciences, The Center for the Study of Rationality, The Institute for Advanced Studies, and the Jewish National and University Libraries.
- Ein Kerem campus, site of the Faculty of Medicine (The Hebrew University–Hadassah Medical School, Braun School of Public Health and Community Medicine, School of Pharmacy, and the School of Nursing) and the Faculty of Dental Medicine.
- Rehovot campus, site of the Robert H. Smith Faculty of Agriculture, Food and Environment (The School of Nutritional Sciences and The Koret School of Veterinary Medicine).
- An additional site is the Interuniversity Institute for Marine Science in Eilat, operated by the Hebrew University for the benefit of all institutions of higher learning in Israel.

Below is the over-all number of students studying towards academic degrees in the institution according to degree:

Students of the Hebrew University (2009)			
1st degree	2nd degree	Ph.D	Total
11,540	6,598	2,615	22,871

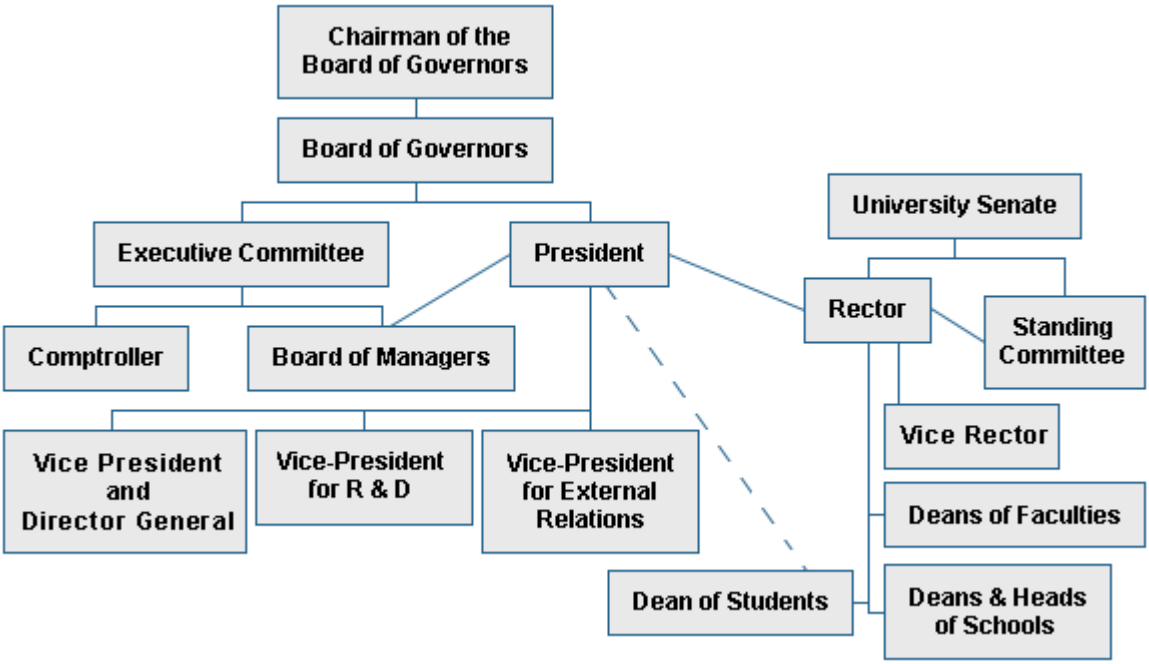
1.2 Mission statement of the institution, its aims and goals

As the first research university in Israel, The Hebrew University's mission is to develop cutting edge research, and to educate the next generations of leading scientists and scholars in all fields of learning. The Hebrew University is part of the international scientific and scholarly network: we measure ourselves by international standards and we strive to be counted among the best research universities worldwide.

The Hebrew University is a pluralistic institution, where science and knowledge are developed for the benefit of humankind. At the same time, the study of Jewish culture and heritage are a foremost legacy of the Hebrew University, as indicated by both its history and its name.

The goal of the Hebrew University is to be a vibrant academic community, committed to rigorous scientific approach and characterized by its intellectual effervescence. These will both radiate and enlighten the University's surrounding society.

1.3 A description and chart of the institution's organizational structure



1.4 Names of holders of senior academic and administrative positions

University Structure:

Chairman of the Board of Governors:	Michael Federmann
President:	Prof. Menahem Ben Sasson
Rector:	Prof. Sarah Stroumsa
Vice-President and Director-General:	Billy Shapira
Vice-President for Research and Development:	Prof. Shai Arkin
Vice-President for External Relations:	Carmi Gillon
Vice-Rector:	Prof. Yaacov Schul
Vice-Rector	Prof. Oded Navon
Comptroller:	Yair Hurwitz

Deans:

Faculty of Humanities:	Prof. Israel Bartal
Faculty of Social Sciences:	Prof. Avner de Shalit
Faculty of Law:	Prof. Barak Medina
Faculty of Mathematics & Natural Science:	Prof. Gad Marom
Faculty of Agriculture, Food & Environment:	Prof. Aharon Friedman
Faculty of Medicine:	Prof. Eran Leitersdorf
Faculty of Dental Medicine:	Prof. Adam Stabholtz
School of Business Administration:	Prof. Dan Galai
School of Social Work:	Prof. Gail Auslander
Dean of Students:	Prof. Esther Shohami

2 The Faculty of Social Sciences and

2.1 2.2 History and Objectives

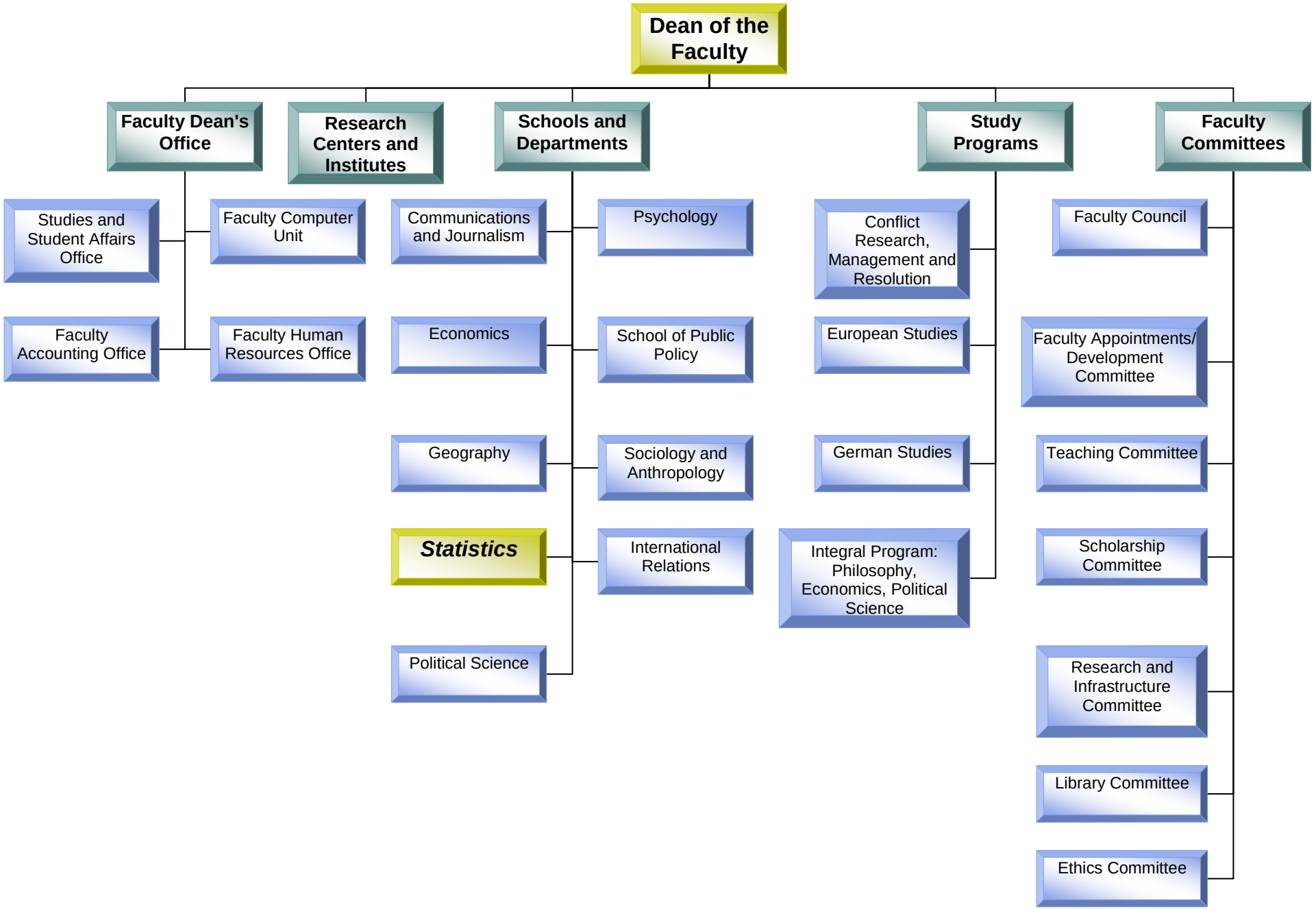
The first essays at teaching and conducting research on social topics at the Hebrew University were already under way in the 1930s and 1940s. At first, particular disciplines such as Jewish sociology, the sociology of religion, and the economy and sociology of Israel and the Middle East developed separately within the various departments of the Faculty of Humanities. Later, these subjects were joined with others to form a Social Sciences Department within the Faculty of Humanities.

The social transformation that came in the wake of the War of Independence elucidated the need to develop this area of knowledge even further. Mass immigration had doubled Israel's population within just a few of years and had fundamentally transformed the social fabric. The economy was quickly expanding, and had run up against some serious obstacles. These conditions brought about an acute and sudden need for economists, sociologists, statisticians and management professionals in both the public and the private sectors. The University at that time viewed its raison d'etre to educate the young in these professions and to systematically develop research and tuition in the fields of economics, social studies, and management. The University was finally able to assume this function when its initiative coincided with a similar program put forth by friends and admirers of the late Eliezer Kaplan (lead by Yossef Sprinzak of blessed memory). These men wanted to honor the memory of Israel's first Minister of the Treasury, who had contributed greatly to the establishment of a national economy under public administration, by lending his name to a new institution charged with securing a future for that economy and its proper administration.

That institution was launched in 1953 and was recognized as a separate Faculty, though it maintained a special relationship with the Faculty of Humanities for some time thereafter, developing its curriculum within the framework of the latter. The class of '54-'55 already numbered 360 students, and their numbers grew annually. The joint framework of authority was divided in the spring of 1968, rendering the Faculty of Social Sciences separate and independent from then on. In the academic year of 1955-1956 the new Faculty was entrusted with a new building in Givat-Ram. However, it later returned to the Mt. Scopus campus in 1987 for the first time since the War of Independence.

Today the Faculty is comprised of eight departments (Psychology, Sociology and Anthropology, Geography, Communications and Journalism, Statistics, Economics, Political Science, International Relations), the Federman School of Public Policy and Government, and the following study programs: Integrative Program in Philosophy, Economics and Political Science; Urban and Regional studies; European Studies; and Conflict Research, Management and Resolution; Woman and Gender Studies; German Studies. The Faculty views tuition and research in the social studies as its prime objective, educating students in the social sciences on the one hand, while on the other laying the theoretical foundations for knowledge in the social sciences via foundational and applied research.

2.3
STRUCTURAL ORGANIZATION



2.3.1
FACULTY COMMITTEES

Faculty Council
All tenure-track faculty members sit on the Faculty Council. The Dean serves as Chair. Issues of principle significance are brought before the Council after having been discussed and authorized by the Academic Matters Committee or other Faculty Committees.

Faculty Appointments/Development Committee
Chair: Prof.Avner De-Shalit, Dean
The Faculty Appointments/Development Committee discusses the acclimatization and appointment of new Faculty members. It also discusses faculty development programs and initiatives.

Teaching Committee
Chair: Prof. Menachem Hofnung
The Academic Matters Committee deals with issues related to study curricula and tuition. Committee members are chosen by the Dean and represent the Faculty's various departments. The representative of the student body of the Faculty also participates in the Committee meetings. The Academic Matters Committee incorporates a Subcommittee of Student Affairs, which addresses extraordinary student requests that depart from the rules and regulations laid down in the Faculty course catalogue.

Scholarship Committee
Chair: Prof. Rehav Rubin
The Scholarship Committee determines students' and visitors' eligibility for scholarships. Such scholarships include: Merit scholarships for post-graduate students, comprehensive scholarships for doctoral students, the Rothschild Scholarship for post-doctoral research, the Lady Davis scholarship for Professors and Post-Doctoral visitors.

Research and Infrastructure Committee
Chair: Prof. Udi Shavit
The Faculty Research and Infrastructure Committee assists in procuring equipment and means essential to Faculty researchers. The Committee coordinates vis-à-vis the University authorities the allocation of acclimatization resources to Faculty newcomers, allocates Faculty resources, and serves as a conduit for general coordination between the Faculty and the University Research and Development Authority.

Library Committee
Chair: Prof. Moshe Maor.
The Library Committee is primarily responsible for expanding the libraries and databases at the disposal of researchers and students in the Faculty. The Committee oversees the transfer of printed journals to electronic databases, and ensures efficient and effective use of budgetary funds earmarked towards updating the

libraries of the various departments. The Committee is also responsible for directing Faculty resources towards procuring quality high-ranked journals and towards updating the map library and social sciences database.

Ethics Committee
Chair: Prof. Jonathan Huppert.
The Ethics Committee discusses research proposals and ensures that all research conforms to the principles established in the Helsinki Declaration.

2.4 FACULTY ADMINISTRATION

Dean, Prof. Avner De-Shalit

Associate Dean, Mr. Dotan Zaidel

Academic Secretary, Ms. Margalit Drori

Accountant, Ms. Dalit Chen

2.5 FACULTY ACADEMICS: DEPARTMENTS AND STUDY PROGRAMS

Department of Communications and Journalism
Department Head – Prof. Menahen Bloondheim

Department of Economics
Department Head – Prof. David Genesove

Department of Geography
Department Head – Dr. Noam Shoval

Department of International Relations
Department Head – Prof. Moshe Hirsh

Department of Political Science
Department Head – Prof. Mario Sznajder

Department of Psychology
Department Head – Prof. Asher Cohen

Department of Sociology and Anthropology
Department Head – Prof. Gad Yair

Department of Statistics
Department Head – Prof. Moshe Haviv

Graduate Program in Conflict Research, Management and Resolution
Program Director – Prof. Ilana Ritov

Graduate Program in European Studies
Program Director – Prof. Bianca Kuhnel

Graduate Program in German Studies
Program Director – Prof. Bianca Kuhnel

Honors Graduate Program in Public Policy
Head of School of Public Policy – Prof. Dan Avnon

Integrative Bachelor's Program: Philosophy, Political Science and Economics (PPE)
Program Director –Dr. Daniel Attas

Urban and Regional Studies
Program Director- Prof. Daniel Felsenstein

Women and Gender Studies
Program Director- Prof.Mimi Ajzenstadt

EXACT WORDING ON DEGREE CERTIFICATE

Bachelor's Degree

ENGLISH WORDING	נוסח התעודה בעברית (HEBREW)	סוג התעודה
Bachelor of Arts **Upon completing the required course of studies and passing the prescribed examinations** **In the departments of…** **(name of the department)** **&** **(name of the department)**	**בוגר אוניברסיטה במדעי החברה .B.A** **לאחר שסיים (שסיימה) את מסכת הלימודים בחוגים** **(1. חוג ממדעי החברה)** **(2. חוג ממדעי החברה)**	**בוגר דו חוגי** **שני חוגי הפקולטה למדעי החברה**
Bachelor of Arts **Upon completing the required course of studies and passing the prescribed examinations** **In the departments of…** **(name of the department)** **&** **(name of the department)**	**בוגר אוניברסיטה במדעי החברה וב..(פקולטה נוספת) .B.A** **לאחר שסיים (שסיימה) את מסכת הלימודים בחוגים** **(1.חוג ממדעי החברה)** **(2.חוג מפקולטה אחרת)**	**בוגר דו חוגי** **חוג מהפקולטה למדעי החברה וחוג מפקולטה אחרת**
Bachelor of Arts **Upon completing the required course of studies and passing the prescribed examinations** **In the departments of…** **(name of the department)** **&** **(name of the department) - minor**	**בוגר אוניברסיטה במדעי החברה והרוח .B.A** **לאחר שסיים (שסיימה) את מסכת הלימודים בחוגים** **(1. חוג ממדעי החברה)** **(2. חוג ממדעי הרוח) - חוג משני**	**בוגר דו חוגי** **חוג מהפקולטה למדעי החברה וחוג משני מהפקולטה למדעי הרוח**
Bachelor of Arts **Upon completing the required course of studies and passing the prescribed examinations** **In the department of…** **(name of the department)**	**בוגר אוניברסיטה במדעי החברה** **לאחר שסיים (שסיימה) את מסכת הלימודים בחוג** **(שם החוג)** **ובלימודים משלימים**	**בוגר חד חוגי** **חוג ממדעי החברה ולימודים משלימים**

English Wording	נוסח התעודה בעברית (Hebrew)	סוג התעודה
&		
Supplementary studies		
Bachelor of Arts	בוגר אוניברסיטה במדעי החברה והרוח .B.A לאחר שסיים (שסיימה) את מסכת הלימודים	בוגר בתכנית המשולבת – פכ"מ
Upon completing the required course of studies in the joint program in the departments	בתכנית משולבת:	
(name of the departments)	פילוסופיה , כלכלה, מדע המדינה	
Bachelor of Arts	בוגר אוניברסיטה בפקולטה למדעי החברה ובמוסיקה B.A ובמחול B.A Dance / MUS	תכנית משותפת לתואר בוגר של האוניברסיטה והאקדמיה למוסיקה ע"ש רובין בירושלים
Upon completing the required course of studies and passing the prescribed examinations	לאחר שסיים (שסיימה) את מסכת הלימודים	
In the departments of…	באוניברסיטה העברית – בחוג....	
(name of the department)	באקדמיה למוסיקה ומחול – בחוג ל....	
&		
(name of the department)		

Master's Degree

EXACT ENGLISH WORDING ON CERTIFICATE		נוסח התעודה בעברית (HEBREW)		סוג התעודה
NON-THESIS TRACK	THESIS TRACK	לא מחקרי	מחקרי	
Master of Arts Upon completing the required course of studies in the department of (name of the department / name of the program)	Master of Arts Upon completing the required course of studies and submitting the prescribed thesis in the department of (name of the department / name of the program)	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בחוג / בתכנית מוסמך	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים וחיבר (וחיברה) עבודת גמר בחוג / בתכנית מוסמך	מוסמך בחוג/תכנית לימודים
Master of Arts Upon completing the required course of studies in the department of (name of the department) Program in…/ Specialization in…	Master of Arts Upon completing the required course of studies and submitting the prescribed thesis in the department of (name of the department) Program in…/ specialization in…	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בחוג במגמה ל... / בהתמחות ב...	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים וחיבר (וחיברה) עבודת גמר בחוג במגמה ל... / בהתמחות ב...	מוסמך במגמה/במגמות ו/או בהתמחות/התמחויות
Master of Arts Upon completing the required course of studies in the joint program in the departments of economics business administration / statistics Specialization in…	Master of Arts Upon completing the required course of studies in the joint program and submitting the prescribed thesis in the departments of economics business administration / statistics	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בתכנית משולבת בחוגים כלכלה מינהל עסקים / סטטיסטיקה התמחות ב....	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים וחיבר (וחיברה) עבודת גמר בתכנית משולבת בחוגים כלכלה מינהל עסקים / סטטיסטיקה	תכנית משולבת כלכלה וסטטיסטיקה / כלכלה מנהל עסקים עם התמחות/ או בלי התמחות (תכנית משולבת עם ביה"ס למנהל עסקים)

EXACT ENGLISH WORDING ON CERTIFICATE		נוסח התעודה בעברית (HEBREW)		סוג התעודה
NON-THESIS TRACK	THESIS TRACK	לא מחקרי	מחקרי	
	Specialization in…		התמחות ב....	
Master of Arts Upon completing the required course of studies / individual program in the departments of (1.name of the department) Program in…/ Specialization in… (2.name of the department) Program in…/Specialization in…	Master of Arts Upon completing the required course of studies and submitting the prescribed thesis / individual program in the departments of (1.name of the department) Program in…/ specialization in… (2.name of the department) Program in…/ specialization in…	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בתכנית אישית בחוגים (חוג 1) במגמה ל...ו/או התמחות ב... (חוג 2) במגמה ל...ו/או התמחות ב...	מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בתכנית אישית וחיבר (וחיברה) עבודת גמר בחוגים (חוג 1) במגמה ל...ו/או התמחות ב... (חוג 2) במגמה ל...ו/או התמחות ב...	תכנית אישית למוסמך עם או בלי מגמה/מגמות ו/או התמחות/התמחויות
Master of Arts in social sciences upon completion the studies in the program Israel :Society and Politics		מוסמך אוניברסיטה במדעי החברה M.A. לאחר שסיים (שסיימה) את מסכת הלימודים בתכנית הלימודים ישראל:חברה ופוליטיקה	לא קיים	תכנית מוסמך ישראל:חברה ופוליטיקה (בחוגים מדע המדינה או סוציולוגיה ואנתרופולוגיה לתלמידי ביה"ס לתלמידים מחו"ל ע"ש רוטברג)

2.6

NUMBER OF STUDENTS ADMITTED OVER THE LAST FIVE YEARS, LISTED BY DEGREE:

	B.A.	M.A	Thesis track	Non-thesis track	PhD
2009	2187	1048	469	579	283
2008	2258	1062	469	587	295
2007	2279	1080	467	613	313
2006	2231	1097	415	682	302
2005	2266	1134	445	689	315

NUMBER OF STUDENTS GRADUATED OVER THE LAST FIVE YEARS, LISTED BY DEGREE:

	B.A.	M.A	Thesis track	Non-thesis track	PhD
2009	557	369	137	225	37
2008	603	344	108	232	27
2007	610	321	108	212	26
2006	577	293	104	184	31
2005	580	305	87	215	32

2.7 Planning and Policy-Making Bodies

The Faculty has a **Development Committee** to assist the **Dean** with policy making. Periodically the Dean, with the assistance of the development committee, submits a Faculty Development Plan. No such plan was written or submitted in the last five years. However, all departments submitted to the Dean departmental development programs in 2006.
Each department, and on occasion also a teaching program, is monitored periodically by an **External Evaluation Committee**, which is either appointed by the Rector or by the Council for Higher Education and comprised mostly of high standing academics from abroad. The committee evaluates the department or program in terms of research, personnel, teaching and its international status, submits proposals for changes and improvements. The following programs were monitored until 2006: The department of geography, the B.A. PPE program (philosophy, political science and economics), the M.A. program in conflict resolution and the M.A. program in Middle Eastern studies. The last program was closed as a result of the monitoring committee's report. During 2007 the departments of political science and international relations were monitored, and in 2008, the departments of communication and journalism, sociology and anthropology, and psychology were monitored. The reports of the monitoring committees are discussed by the university's **Academic Policy Committee (see 5.1)**, and the Dean has to report to the committee about changes introduced in response to the evaluations committee's recommendations.

Proposals for new teaching programs are submitted by departments or groups of faculty members to the **Faculty Teaching Committee**, which includes representatives of all departments and convenes several times during each semester. If approved by the teaching committee, the proposals are discussed in the **Faculty Council**, which includes all tenure-track faculty members and convenes once or twice every semester. If approved by the faculty council, the proposal is submitted for approval to the university's **Standing Committee of the Senate**. In cases of new academic degree, it is also submitted for approval to university Senate. An example of a new teaching program recently (2007) approved through this process is an M.A. program in German Studies.

Changes in existing teaching programs are initiated by the departments quite frequently. These are submitted for approval to the faculty teaching committee. A recent example is a change in the structure of the M.A. program in international relations. More substantial changes such as offering new specializations within departments are submitted, after the approval of the teaching committee, to the approval of the faculty council. A recent example from last year is a new M.A. specialization in political communication offered by the departments of political science and communication and journalism.

Appointments of new faculty members are carried out as follows: The departments issue a call for applications. The applicants are screened, evaluated and ranked by the **Department Selection Committee**, which is appointed by the standing committee of the senate. The files of the candidates chosen by the departments are submitted to the **Faculty Appointments Committee** (also appointed by the senate's standing committee) which evaluates and ranks the candidates comparatively, taking into consideration both the qualifications and achievements of the candidates and the departments' needs. Depending on the number of available positions, the committee decides on new appointments. The committee's decisions have to be approved by the **Rector** and the **President** of the University.

3 The Evaluated Study Program - Department of Statistics

3.1 The Goals and Structure of the Study Program

3.1.1 The name of the study program, a brief summary describing its development since its establishment

In 1950 the Standing Committee of the Hebrew University approved the founding of a Statistics Department as a minor discipline in the Faculty of Humanities. With the establishment of the Faculty of Social Sciences in 1953, the Statistics department was transferred to it. The name of the department was "The Department of Statistics and Demography", and demography was a compulsory subject integrated with the statistics courses. The department was located on the second floor of the Levy Building on the Edmund Safra Campus.

There were only 4 compulsory courses:

1. Introductory Statistics, which essentially was composed of descriptive statistics, various indexes, and methods of shorthand calculations.

2. Basic Probability Theory.

3. Statistical Inference, concentrating on estimation and hypothesis testing about one- dimensional parameters.

4. Introduction to Demography.

There were 3 teachers in the department: Professor Roberto Bachi, who taught courses 1 and 4, interchangeably with Professor Helmut Muehsam, and Dr. Reuben Kuno Gabriel, who taught the Statistical Inference course. The Probability course was taught by Professor Arieh Dvoretzky of the Mathematics Department. All courses were accompanied by exercise sessions, taught by teaching assistants. The establishing force of the department, and its long time first chairman was Professor Bachi, who at the same time also served as the Chief Statistician of the State of Israel. Some elective courses may also have been taught.

The student body at the beginning was quite mixed. Some students studied Statistics together with Economics. Many others came from the Faculty of Science. A student in the faculty of science, at that time, was required to choose three major subjects, and Statistics was considered an 'easy subject' combined with Mathematics and Physics. Many of the latter students would attend classes very selectively. For many years, even as more and more disciplines were taught at the University, there was only one Introductory Statistics course taught, and it was a compulsory course in all curricula which required some knowledge of statistics.

Later, around 1961, Professor Louis Guttman joined the department, on a half time basis, and he became its second chairman. In the nineteen sixties several new members were added to the faculty: Ester Samuel [later Samuel-Cahn], Gad Nathan, David Mejsler and Gideon Schwartz, to mention just a few, and in the seventies the department expanded further. Many of the new appointees to the department, such as Zvi Gilula, Danny Pfefferman, Moshe Pollak and Yosef Rinott were former students in the department, who later continued graduate or post graduate studies abroad. The late Yohanan Wax and David Assaf joined somewhat later. During that time the core-course requirement was enlarged, and many more courses were offered. In 1969 the department split into two separate departments: The Department of Statistics and the Department of Demography.

At some stage, probably in the sixties, a Program in Actuarial Studies was offered, but this was discontinued later on. A Consultation Unit was established inside the department in the late nineteen-sixties, or early seventies. Its purpose was to help researchers from inside the university with

statistical planning and evaluation of their data. The service was free of charge, and was meant also to give the student some 'hands on' experience with real statistical work and data. Later on the Consultation Unit expanded, became a semi-independent unit with its own budget, offering statistical consultation, for a fee, also to entities not directly connected to the university.

The department offered (essentially) three degrees: BA (or B.Sc. if the student was registered in the Faculty of Natural Sciences, which included Mathematics), MA (or M.Sc.) and Ph.D., as it does today. Almost all students who studied for the higher degrees held a Bachelor's degree in Mathematics.

In 1980 the department moved to Mount Scopus, together with the entire Faculty of Social Sciences. The move followed a vivid discussion about whether the department should split from the Faculty of Social Sciences and join the Natural Sciences instead, but the final decision was to remain in the Social Sciences. In order to keep the "Science" students, mainly from Mathematics, but also some from other disciplines, the department started offering some core statistics courses for an undergraduate degree in Statistics also at the Edmund Safra Campus. This continues until today, putting an extra burden of teaching on the department. The move has also caused a decline in the number of better students for the higher degrees, and has had a negative effect on interactions between the faculty of the departments of mathematics, statistics and computer science.

With the expansion of the University and its student body, the introductory statistics course was split into many separate introductory courses, tailored for the various departments by which they were required. All courses were and are taught by members of the Statistics Department, or by persons delegated by the department.

Over the years the Master's Degree program offered several specializations. In the beginning just three: Applied Statistics, Theoretical Statistics and Operations Research. Later also Biostatistics and Official Statistics were added as specializations.

At its maximum the department consisted of over twenty members, some of whom had joint appointments with other departments. With the retirement and passing away of some of its members the department has declined in size and has now 15 active non-retired faculty(see appendix)

3.1.2 Mission statement of the study program, its aims and goals

Just as mathematics is the language of the physical sciences, statistics is the language of the social sciences, the medical sciences and the life sciences. Wherever experiments are run statistics comes into play: not only is it the accepted word regarding the results of an experiment, but to make the results reliable it enters already at the planning stage.

There are many aspects to statistics: applied, theoretical, mathematical, and philosophical. Most experiments require making decisions in the face of uncertainty, brought about by constraints (time, money, availability) on sample size. Furthermore, every applied problem has its own idiosyncrasies, often requiring theoretical work peculiar to the situation at hand. Theoretical work is invariably made up of mathematical analyses, and often simulation is called in to corroborate applicability.

Not all of statistics deal with small samples. With the increasing strength of computers comes the opportunity to handle large data sets, and this often requires methods of separating the chaff from the wheat.

Neither is all of statistical endeavor geared towards experimentation. Operations research deals with optimizing procedures, probability theory deals with characterizing the behavior of processes, machine learning has to do with construction of algorithms and statistical computation deals with problems arising from the complexity of large data sets, large parameter spaces, graphics and design.

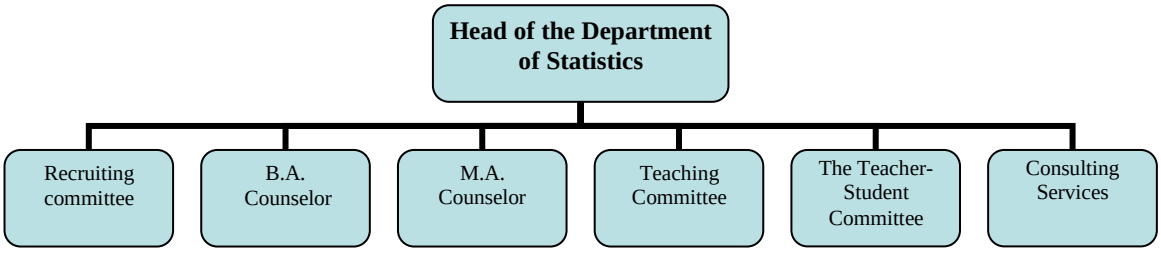
The mission of the Department of Statistics is to research, teach and disseminate knowledge of statistical methods, both in theory as well as in applications. The Department of Statistics consists of faculty who do research in a wide variety of fields, of graduate students who participate in research, of undergraduate students who are learning the ropes, and of dedicated staff who see to it that everything runs smoothly. In the undergraduate level, the department offers courses towards a B.A or a B.Sc degree in statistics as well as a wide variety of service courses offered to other departments with needs of teaching statistics to their students. Students who complete a bachelor's degree in statistics have a strong background in the discipline, and can be expected to be able to handle a wide variety of classical statistical problems. At the masters level, the department offers specialization in theoretical statistics, applied statistics, biostatistics, governmental statistics and operations research. Students who go on to obtain a masters degree acquire deeper knowledge and experience, and can be expected to be able to handle complex statistical problems. On the Ph.D. level, students engage in research that often gets published in top journals. Those who complete a Ph.D. degree can be expected to be able to handle non-standard cases, and would be prime candidates for either an academic or senior applied statistical career.

A good number of our academic staff is due to retire during the next decade. Emphasis on different subfields in statistics is changing. The strategic plan of the department is to hire in a way that will enable us to stay in the cutting edge of the subject. Hiring of new faculty is made with this in sight, and our last two hires were in emerging subfields.

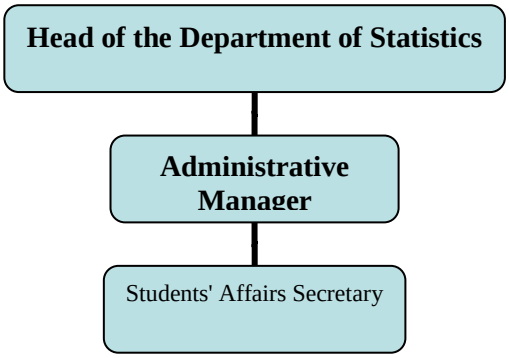
Regarding dissemination of statistics, the department sees itself as responsible for serving the academic public at large. It is the firm belief of the department that statistics is best taught by a statistician. Although we recognize that there might be disciplines (like Psychology) that fare better in being self-sufficient in teaching their statistics courses we think that only someone passionate enough about statistics to make a career of it can impart the enthusiasm about the subject that makes (or breaks if absent) a course. We implement this by offering service courses to any department that is interested, even at the expense of skimping on elective courses for our own students. We hope that this contributes to educating the public in quantitative thinking, in turn improving research in all fields of science.

3.1.3 Description and chart of the academic and administrative organizational structure of the study program (including relevant committees)

Academic Organizational Structure:



Administrative Organizational Structure:



3.1.4 Names of holders of senior academic and administrative positions.

Academic Staff:
Chair of the Department of Statistics – Prof. Moshe Haviv
MA Counselor- Prof. Zvi Gilula
BA Counselor - Dr. Asaf Sarig
PhD Counselor - Prof. Ya'acov Ritov

Chairs of Department Committees:
Recruiting Committee – Prof. Offer Kella
Teaching Committee - Prof. Samuel D. Oman

Program Coordinators (Teaching Committee):
Statistical Methods – Prof. David Zucker
Operations Research – Prof. Ofer Kella
Biostatistics - Prof. David Zucker
Official Statistics – Dr. Ronit Nirel
Statistics in Mathematics and Probability – Prof. Ya'acov Ritov

Administrative Staff:
Chair of the Department of Statistics – Prof. Moshe Haviv
Administrative Manager – Ms. Rachel Bankir
Students' Affairs Secretary – Mrs. Clare Pagis

Organization Description

The Chairperson of the department is a senior faculty member, typically at the rank of full professor or associate professor. Chairpersons usually have prior experience in departmental, faculty, and university-level committees. They are familiar with the university's institutional structure and procedures. The department chairperson is appointed for a period of 3 years (with an option of 4 years) by the General Assembly of all the teachers in the department, based on recommendations made by a search committee (consisting of the three senior faculty members).

The chairperson appoints three advisors, an MA counselor, a BA counselor, PhD counselor, and an advisor for each of the MA programs. Typically, the advisors are Senior Faculty Members and their functions are: (1) to assist in choosing curriculum and to approve changes in the curriculum, (2) to offer advice regarding and academic problems.

The chairperson also appoints coordinators for the various areas in the department. These coordinators are responsible for the operation of each area's program.
Three major committees are headed by the chairperson:

A. The Program/Teaching Committee. The chairperson appoints this committee, which consists of the directors of the various areas (programs) and the department's administrative director. This committee meets several times a year, as much as needed.
   Its major functions are:

1. To examine and approve changes in the curriculum of each program.
2. To approve new courses offered by members of the department, after which the new courses are approved finally all faculty members.
3. To discuss all matters regarding courses and/or teaching in the department.

B. The Recruiting Committee. The members of this committee are elected by the faculty (up to six members can be appointed by the chairperson, one of them from the Department of Public Health). It has the responsibility of screening and selecting potential new faculty, both junior and senior, and preparing their files for further evaluation by the Faculty of Social Sciences committee. In addition, the chairperson consults with this committee on major academic issues and other departmental matters on an ad hoc basis.

C. The Teacher-Student Committee. This committee consists of the chairperson, the BA and MA advisors and 1-2 student representatives from each of the three years of the undergraduate and MA programs. The committee meets to discuss and solve problems raised by the student representatives.

D. The chairperson also monitors the activity of the consulting services (see more details ahead)

The administrative staff consists of two administrative positions: the Department Administrative Manager (Ms. Rachel Bankir), the Students' Affairs Secretary (Mrs. Clare Pagis).

The Departmental Administrative manager is responsible for:

- The general management of staff and offices
- Preparation of the department's course catalogue
- Preparation of the teacher's yearly teaching schedule, taking their credit obligations into account.
- Management of the department's budget, including external funds.
- Representation of the department when dealing with faculty and university authorities.
- Management of the appointments of junior academic personnel and administrative staff.
- Management of scholarships (students and guests).
- Hiring of teaching assistants and supervisors, and their job assignments.
- Maintenance of the teaching equipment, offices, laboratories, etc.

The responsibilities of the Students' Affairs Secretary and her assistant include:

- Providing information and guidance for BA, MA, and PhD students, regarding student affairs and the course catalogue and program.
- Correspondence with potential students.
- Overall coordination of the student exams.
- Verifying prerequisites for courses
- Verifying BA and MA entitlement and completion of the requirements.

3.2 The Study Program – Contents, Structure and Scope

3.2.1 The name of the study program, specializations/tracks within the program, the campus where it is taught (if the institution operates in the number of campuses), date of opening the program. If the study program is offered in more than one campus, is the level of the program uniform in different campuses, and what measures are taken in order to ensure this?

The Department of Statistics offers 3 main study programs:

- A 3-year program towards the degree Bachelor of Statistics (BA/B.Sc)
- A 2-3 years program towards the degree Master of Statistics (MA/M.Sc)
- A 4-5 years program towards the Doctorate degree (PhD)

The MA program trains students in 5 areas of Statistics: Bio-Statistics, Statistical Methods, Official Statistics, Operation Research, and Mathematical Statistics.

The PhD program is administered by the Hebrew University (HU) Authority for Research Students.

The Bachelor program is mainly taught on Mount Scopus. Some courses (both introductory and advanced) are taught also on Edmund Safra campus especially to accommodate students from the Faculty of Natural Sciences (mainly Mathematics and Computing Sciences). Introductory and more advanced courses are also offered to many other departments such as Business, Chemistry, Communication, Political Sciences and International Relations and Pharmacology and Nursing taught on Ein Kerem Campus. The Department of Statistics offers by far the highest number of service courses compared to any other department. Last year it serviced about 2000 students altogether. Almost by definition, the difference in needs of departments requesting service courses impose non-uniformity of course having the same title ("introduction to statistics for…"). This clearly adds extra burden on planning and delivering these courses.

3.2.2 The study program and the specializations it offers, its content, scope and structure (years of study, semesters, hours per year and credits) and the distribution of the studies throughout the academic year. Please submit this information in Table 1 (page 14). Does the study program supply courses to other units within the institution?

The objective of the program is to provide the tools for analytical thinking, through theoretical and practical approaches, using computer applications in order to collect, understand, analyze, and improve the efficiency of the complex systems that are readily found in unknown conditions. An emphasis is placed on understanding coincidence (Probability), the different approaches to analyze variation in the data (Statistics), and a selection of methods of efficiency (Operations Research). Prospective employment opportunities after graduation are diverse, both in practical applications of Statistics, Probability, Operations Research, and Research in the private, public, and academic sectors. Moreover, the analytical methods and tools of Statistics, Probability and Operations Research are the cornerstones to many other fields: Medicine, Biology, Computer Science, Economics, Physics, Agriculture, Political Science, Statistics, Industry, Management, Education, Social Services, et cetera. awarded with scholarships, and in addition are employed as statistical consultants through the Department.

Undergraduate Program

Overview: Education that encompasses three years includes both compulsory and elective courses. In the first year all department students are required to enroll in a double major track, with the option in the second year to continue in a single major, in conjunction with faculty byelaws.

Prerequisites: The Department of Statistics curriculum is based on the successful completion of courses during the degree. Participation in core or elective courses depends on receiving a passing grade (at least 55) in the courses that are on the prerequisite list for each course. Details of the prerequisites of the different courses can be found in the description of each course in the Student Program Guide.

Study Program:

There are three tracks that are available to students: A double major degree (65 credits), medium length single major degree (69 credits), and a long single major track (75 credits). In each of the academic tracks the student must enroll in both obligatory core courses and a project as explained below:

Study Program	Double Major	Single Major	
		Long	Short
Core Courses	50 Credits	50 Credits	50 Credits
Project	5 Credits	5 Credits	5 Credits
Elective Core Courses	6 Credits	6 Credits	6 Credits
Elective Courses		14 Credits	8 Credits
Total	61 Credits	75 Credits	69 Credits

It is the responsibly of the student to fulfill the rest of the credit quota in accordance with the track chosen: double major, 10 credits; medium length single major, 14 credits; long single major, 20 credits; subject to two conditions:

- At least two of the courses must be elective core courses within the Department of Statistics.
- No more than one elective course can be from another department, excluding foreign language courses and any Computer Programming course given at the Mount Scopus campus.

Core Courses

	Name	Credits
First Year		
1.	Basics: Probability, Data and Computers	6
2.	Principles and Applications in Statistical Analysis	5
3.	Math for Economists and Statisticians A1	7
4.	Math for Economists and Statisticians A2	7
Second Year		
5.	Programming for Statistical Applications	3
6.	Statistical Inference and Applications A	5
7.	Statistical Inference and Applications B	3
8.	Vector Spaces and Matrices	4
9.	Regression and Linear Models	4
Third Year		
10.	Statistical Models and their Analysis	4
11.	Statistics Lab	2
12.	Project (Class + Seminar)	5

Elective Courses: A comprehensive list of the elective courses within the department can be found in the Student Program Guide. Prerequisites of each elective course are Core Course numbers 5, 7, and 9 unless stated otherwise.

Elective Core Courses:

Name	Credits
Principles of Research Design and Sampling Methods	3
Introduction to Operations Research - Deterministic Models	3
Introduction to Operations Research – Stochastic Models	3
Time Series Analysis	3

Students must take two of the elective core courses to complete the degree

Advanced Studies

Advanced education within the Department encompasses both the Master and Doctoral Degrees. Studies towards the completion of the Master Degree in Statistics are intended to broaden and deepen, the knowledge needed to prepare the students for analytical and practical research, and the application of Statistics and Operations Research in a wide array of employment and research fields. Fellowship is built into the study programs and is selectively offered to students Master students are encouraged by the Department to integrate their studies with research, consultation, and teaching so as to deepen their education and prepare them for Statistical Research, Operations Research, and the private sector.

Education Towards the Masters Degree

Education in the Master Program is open to graduates of Statistics in, Social Sciences, Natural Sciences, and other disciplines that have the necessary credits in Statistics Courses (Introduction to Probability and Statistics, Statistical Inference, Linear Models and Regression, Statistical Models and their Application). Students who do not have the necessary background in the aforementioned courses in their Bachelors Degree must complete them as required.
The Department encourages the enrolment of excellent students with backgrounds in Mathematics (e.g. Bachelors in Mathematics or Computer Science). Students who qualify in these fields can be admitted to the Masters Program even if their Statistics background is only in Introduction to Probability and Statistics, Statistical Theory, Applicable Regression, and Computers. Such students must speak to the Graduate Student Advisor in order to prepare a personal program which includes the courses needed to bridge the previous Bachelors Degree to begin the Master Degree in the Department.

Programs which are taken within the Social Sciences Faculty are towards a Masters Degree or within the Natural Sciences Faculty towards a Master of Science Degree.

There are four programs in the **Social Sciences Faculty:**

1. Statistical Methods
2. Operations Research
3. Biostatistics
4. Official Statistics

Students that apply through the Social Sciences Faculty can choose between a Research Track with a research project (MA thesis) and a Non-Research track, which has more courses to choose from and no research project.

There is one program in the **Natural Sciences Faculty:** Statistics in Mathematics and Probability, only a Research Track is available in this program.

Students that have either B.A. or B.SC in statistics can can register to either the social-science tracks or the natural-science track. Students who apply to the Masters Program through the Natural Sciences Faculty must complete the Degree within two years. Given their (much) better mathematical skills, the total number of hours studied by the students in the Natural Sciences Faculty is a bit lower than those required from the Social Sciences Faculty students.

Programs in Social Sciences

Program 1: Statistical Methods
This program is intended to train statisticians to develop and apply statistical methods for practical uses in a wide range of fields, e.g.: Economics, Medicine, Environmental Sciences, Industry, et al. The curriculum of this program is based on the development of Mathematic ability of the students, but the aim and use of the methods will be more stressed. Research and Non-Research tracks are available in this program.

Program 2: Operations Research
The curriculum in this program is aimed to train students that enter the professional and research arenas of Operations Research. This field deals with development, analysis, and the derivation of conclusions from mathematical models through a wide range of problems in allocation of resources subject to different constraints. There are two distinct types of problems that can split the discipline into two: Applied Probability (Series, Reliability, Simulation, Time dynamic decision making problems subject to uncertain conditions, et al.) and Deterministic Models (Linear and Non-Linear Programming, Network Flows, Scheduling, et al.). Research and Non-Research tracks are available in this program.

Program 3: Biostatistics
This program is given jointly with the School of Public Health of the Hebrew University at The Ein Kerem Campus. The curriculum gives the students the basis for statistical methods stressing the disciplines and applications that are important to medical research. These disciplines include clinical tests (Research that tests the efficiency of new medical treatment or therapy) and Epidemiology (Research of the rate of morbidity or mortality in a specific population and the connections between the rates to other hazardous factors). Research and Non-Research tracks are available in this program.

Program 4: Official Statistics

The curriculum in this program is intended to train students in Official Statistics. In the framework of the program there is a possibility of employment in the Central Bureau of Statistic (CBS). The employment is a 12 hour work week for up to two years. This opportunity is conditional to the number of applicants, their qualifications, and the Bureau's ability to receive the students. Employment will be in one or more of the departments of the CBS as needed by the Bureau and to further the education of the students. With completion of employment in the CBS the student will write a summarizing report of his work at the Bureau and will submit it to both the University and the CBS. The employment can be used as the base of the Seminar Project in the framework of the Seminar Paper in Statistical Methods or Official Statistic, and can be used for the Final Project of the Master Degree. Students employed at the CBS will be compensated with a salary that is proportional to the number of hours worked at the same level employee that fits their qualifications. In addition there are departmental scholarships that are given to students in this program, in accordance with the monetary possibilities and criteria that will be decided upon at the appropriate time.

Natural Sciences

Program 5: Statistics in Mathematics and Probability

Studies in this program are theoretical with a wide us of mathematical tools. The program is intended to train researchers who will deal with theoretical development. This program is only given in a research track.

The following is the full list of credits that are required by the Faculty of Social Sciences, ordered by program and track that the student can choose from. The table includes the number of obligatory core course credits, the number of credits required by the Department of Statistics, and the total credits required for the degree.

Table A: Required Credits: Enrollment in Social Sciences

	Core Courses	Departmental	Total
Research Track			
Program 1 (Statistical Methods)	26	35	41
Program 2 (Operations Research)	35	35	43
Program 3 (Biostatistics)	43	34	43
Program 4 (Official Statistics)	35	35	41
Non-Research Track			
Program 1 (Statistical Methods)	26	40	49
Program 2 (Operations Research)	35	42	49
Program 3 (Biostatistics)	43	40	49
Program 4 (Official Statistics)	35	35	49

The Faculty of Natural Sciences has a requirement of a total of 31 credits, of which 27 are core courses, including 10 credits of core courses from the Department of Mathematics. The other courses that are taught in the program (Statistics in Mathematics and Probability) are in the Department of Statistics.

Curriculum

The curriculum is compiled of core courses, seminars, and electives as described in the following lists. All courses must be selected from these courses in accordance with the chosen program:

Statistical Methods Program (Social Sciences)

Core Courses

Base Courses

	Course Number	Course Name	Credits	Comment
1.	52801	Advanced Statistical Models A	6	
2.	52805	Advanced Statistical Models B	6	Prerequisite 52817
3.	52817	Probability and Random Processes	6	Statistics Department
4.	52879	Computational Methods in Non Linear Optimization	2	

		Total	**20**	

Seminars:

5.		Seminar	3	Any Program
6.		Laboratory in Statistical Consulting	2	
7.		Departmental Seminar for Graduate Students	1	

		Total	**26**	

Electives

		Research Track	15	
		Non-Research Track	23	

Total Credits Required

		Research Track	41	
		Non-Research Track	49	

Operations Research Program (Social Sciences)

Core Courses

Base Courses

	Course Number	Course Name	Credits	Comment
1.*	52801	Advanced Statistical Models A	6	
	52805	Advanced Statistical Models B	6	Prerequisite 52817
2.	52817	Probability and Random Processes	6	Statistics Department
3.	52879	Computational Methods in Non Linear Optimization	2	
4.	52812	Applied Probability 1	4	
5.	52816	Applied Probability 2	4	
6.	52814	Linear Programming	4	
7.	52815	Non- Linear Programming	2	

		Total	**28**	

Seminars:

8.		Seminar	3	In Operations Research
9.		Seminar	3	Any Program
10.		Departmental Seminar for Graduate Students	1	

		Total	**35**	

Electives

		Research Track	8	
		Non-Research Track	14	

Total Credits Required

		Research Track	43	
		Non-Research Track	49	

* Students must choose one of the courses.

Biostatistics Program (Social Sciences)

Core Courses

Departmental Base Courses

	Course Number	Course Name	Credits	Comment
1.	52801	Advanced Statistical Models A	6	
2.	52805	Advanced Statistical Models B	6	Prerequisite 52817
3.	52817	Probability and Random Processes	6	Statistics Department
4.	52879	Computational Methods in Non Linear Optimization	2	
5.		Seminar	3	Any Program
6.		Departmental Seminar for Graduate Students	1	

		Total	**24**	

Program Base Courses

7.	52710	Principles in Research Design and Sampling Methods	3	Not taught every year
8.	52646	Binary Data Analysis	2	Taught every two years
9.	52526	Survival Analysis	2	Taught every two years
10.		Chosen Topics in Biostatistics	1	In coordination with Prof. Zucker
			---	
		Total	**8**	

Courses in the Design and Analysis of Medical Research

Courses taught at the School of Public Health at En Kerem Campus

11.	95239	Principles and Uses of Epidemiology	2	
12.	98405	Interpretation of Epidemiological and Statistical Data	3	
13.	98481	Clinical Trials	2	

		Total	**8**	

In Depth Project in Biostatistics*

13.		Course in a Specific Epidemiological Discipline	2	Taught in the 1st Semester at the School of Public Health. The Student must choose from one of the courses found in the Graduate Student Handbook
14.		Laboratory in Statistical Consulting	2	Year long Course Based on the Subject chosen in course 13

*Both Courses are taught in the same year (usually in the second year of the degree).

Electives: Non-Research Track Students must learn 6 more credits of electives within the department.				
Total Credits Required				
		Research Track	43	
		Non-Research Track	49	

Official Statistics Program (Social Sciences)				
Core Courses				
Base Courses				
	Course Number	**Course Name**	**Credits**	**Comment**
1.	52801	Advanced Statistical Models A	6	
2.	52805	Advanced Statistical Models B	6	Prerequisite 52817
3.	52817	Probability and Random Processes	6	Statistics Department
4.	52879	Computational Methods in Non Linear Optimization	2	

		Total	**20**	
Seminars:				
5.		Seminar	3	In Official Statistics
6.		Laboratory in Statistical Consulting	2	
7.		Departmental Seminar for Graduate Students	1	

		Total	**26**	
Program Specific Courses				
8.	52803	Random Phenomena in Various Fields	3	
9.	52640	Time Series Analysis	3	Choose two courses from 9-12
10.		Estimation in Small Areas	3	
11.		Statistical Methods in Modern Censuses	3	
12.		Indices	3	

		Total	**35**	
Electives				
		Research Track	6	
		Non-Research Track	14	
Total Credits Required				
		Research Track	41	
		Non-Research Track	49	

Statistics in Mathematics and Probability (Natural Sciences)

Core Courses

Base Courses

	Course Number	Course Name	Credits	Comment
1.	52801	Advanced Statistical Models A	6	
2.	52805	Advanced Statistical Models B	6	
3.	52817	Probability and Random Processes	6	Statistics Department
4.	80426	Numerical Analysis I	3	
5.	52629	Asymptotical Statistics	3	

		Total	**24**	

Seminars:

6.		Seminar from any Program	3	Choose one of the Options
7.		Laboratory in Statistical Consulting	2	

		Total	**26-27**	

Electives: Students must choose 4-5 credits within the Department depending on the choice of Seminar.

Total Credits Required

			31	

Service courses are listed in the appendix

C. Department Seminar for Graduate Students

Each year the department seminar is given to the graduate students of the Department, where lectures are given by both the academic teaching staff and students from the department. The lectures given by the academic staff are on the subject of current research they are doing, and the student lectures are on the subject they are researching for their Master or Doctoral degrees. The seminar is given once a month, and it is obligatory for all Social Science Departmental students, including the non-research track students. The length of the seminar for each student is two years, and one course credit is given for the course. The students do not have to lecture in the seminar. The seminar is not obligatory to the students studying in the Natural Sciences Department. The Department encourage students, even more in the second year of the degree, to come to the weekly departmental seminar, on Monday.

D. Electives

The difference between the total course credits needed and the core course credits in each program, detailed in Table A and the subsequent tables, must be taken from elective courses (either from the Statistics Department or other departments) with the approval of the graduate student counselor. Usually Statistics courses from the Third year of the curriculum of the Undergraduate Syllabus and the Master Program Syllabus will bepermitted, not including the course Data Representation. Courses outside? of the Department will be approved depending on the background and objectives of each student.

Research Project

Graduate Students in the Research Track must complete a final project (MA thesis). In the special monthly graduate seminar, faculty members present their research interests so that students can choose an advisor of their liking. At the beginning of the project the student submits the proposed subject of the project to the Department that contains a detailed description of the subject, a timeline for the duration of the research, and a letter of approval by the advisor of the thesis.
Copies of the finished research project will be handed into the Social Sciences and the “Gad Bone” Department Libraries. In addition to the written project, the student will present the Graduate project to the research project advisor and an additional member of the academic staff, as chosen by the Graduate Student Advisor. During the presentation of the research project the student will answer questions on the subject of the project. The grade of the research project will be on both the written work and the oral representation.

Final Grade Calculation

Natural Sciences Research track		**Social Sciences Research track**	
Courses	50%	Courses	60%
Final Exam	20%	Research Project	30%
Research Project	30%		
		Social Sciences Non Research track	
		Courses	100%

Minimal Requirements:

All students, in both the Natural and Social Sciences, must finish with at least a 60 in all courses. In addition, the Social Sciences Graduate Degree the students must achieve an average grade of at least 70, those students in the research track must receive at least 60 in the research project. The Natural Sciences students on the M.Sc. track must achieve an average grade of at least 60, and a 65 in the final project.

Joint Studies with other Departments

There is the possibility of receiving a joint Graduate Degree, under the supervision of the Graduate Advisors of both departments, and the admission to both departments separately. There is a joint program for Statistics and Economics or Statistics and Business Management. Students can choose from other combinations, for example Statistics and Psychology, under the guidance of the Graduate Advisor, and the approval of the Teaching Committee of the Faculty under each personal case.

1. Statistics - Economics Joint Program

The program is intended for students who completed an Undergraduate Degree in Statistics and Economics.

Non Research Track

In this track the student must complete 57 course credits, of which 28 in the Economics Department (including the Seminar Project) and 29 from the Statistics Department.

Research Track

In this track the student must complete 50 course credits, of which 24 in the Economics Department and 26 from the Statistics Department, and a Research Project.

2. Statistics - Business Management Joint Program

In order to broaden the scope of studies in the Social Sciences a joint program made of the Statistics and Business Management Departments was devised, in which the students will receive a Master Degree in both disciplines.

Students that are admitted to both Graduate Programs are eligible to study in this program; eligibility also depends on the GMAT examination.

For the students that excel in studies, receiving at least an 85 in the single track Statistics Undergraduate degree, and are not eligible to study in the Business Management program, there is an option to be admitted to the joint study program upon a decision by the academic review board.

Non Research Track
In this track the student must complete 58 course credits, of which 29 in the Business Management Department and 29 from the Statistics Department. Studies in the Business Management Department will include basic core courses and specialized studies within the Department. Studies in the Statistics Department will be constructed of core courses, and a seminar according to the program studied within the Department (Statistical Methods, Biostatistics, Official Statistics, or Operations Research Programs). Students will not be allowed to specialize in Operations Research in both Departments.

The study program which the student decides upon must be approved by the Graduate Student Advisors in both Departments. The guiding line to build a suitable study program in will be being able to choose specializations in each Department so they complete each other, so redundant courses will not be taken.

Research Track
In this track the curriculum that the student must complete will be constructed by the Graduate Student Advisors of both Departments, as follows: 26 course credits from the Statistics Department and 25-29 course credits in the Business Management Department.
In the joint program the students will receive a Master Degree and not an MBA.

Research Studies (Doctorate):

Students can apply to Doctorate studies after finishing Graduate studies in the research track (Track A). They can also apply to Doctorate studies in the direct track after finishing Undergraduate studies or after finishing the first year of the Graduate studies.

Doctorate Studies in Rationality

Doctoral students may also entrol in the Center for the Study of Rationality (Edmund Safra Campus) and pursue their studies jointly in the Center and in the Department of Statistics.

Track Objective:
Decision making processes and rational explanations of natural phenomena can be studied through a large rank of disciplines, using a wide variety of research tools. For example, concepts and tools from the field of mathematical game theory can be used to explore economic processes, biological evolution and parliamentary legislation; psychologists use their experimental and theoretical techniques to study processes or rational decision making as well as errors in judgments while statisticians study the methods of decision making using statistical data. Doctoral disertations in rationality that have a strong statistical methodology component are encouraged.

Terms of Admission:
In 2006 the Center inaugurated a graduate program, in cooperation with the departments from which the Center's members are drawn. In order to be admitted to the Center's graduate program students must be admitted to and registered in the doctoral program or the masters program of one of these departments. The student must also meet the additional criteria set by the Center for admission to its program.
Every student in the program must have a background in mathematics at least at the level required for admission to the University's Department of Statistics: This includes differential and integral calculus and linear algebra. Students must also have introductory courses in statistics, probability, and game theory. A certain amount of this background material can be acquired in the course of the student's studies at the Center, with the approval of the Center's Director of Graduate Studies.

Each student must satisfy all academic requirements of the department in which he or she is registered with an additional 15 credits of coursework on rationality-related topics. Courses in fields related to rationality and decision making are offered at the Center itself, as well as various departments throughout the University.

The doctorate thesis will be done in advisement with one of the members of the Center.
Those students which decide to discontinue studies in the Center may complete their Graduate Degree in the Department they are registered in, under its requirements.

The Center will award a number of fellowships to outstanding students, for information students may contact the Center for more information.

Information about the center can be found in http://www.ratio.huji.ac.il

Consulting services

In the late 1960's, the Chairman at that time-(the late) Reuben Gabriel, established the Statistical Consulting Services (SCS). The body of consultants included faculty members and graduate students. Headed by the Chairman, our SCS offered its services to scientists in a wide variety of disciplines. Later on, as the demand for statistical consulting increased, the department, with the blessing and help of the University management, allocated resources to hire a director for the SCS and offered part-time jobs to graduate students. This underlying position was administrative despite its academic content. The late Dr. Yohanan Wax, the first director of the SCS, succeeded in making it a highly appreciated unit among scientists all over Israel. Due to this remarkable success the administration decided that the position of the director of the SCS will be changed to an academic tenure-track position. After Dr. Wax's untimely death, the SCS was run with ad hoc yet very professionally, by some faculty of the department for some years.

About 4 years ago the department hired Dr. Ronit Nirel to head the SCS, which is now named "The Applied Statistics Laboratory". Dr. Nirel continues the tradition of excellent consulting participating in a wide variety of research and consultation projects. In addition. Dr. Nirel is a key instructor in our program in Official Statistics

Through the lab, the Statistics Department seeks to advance statistical practice. This goal is attained through:

(a) *Promoting teaching and research in Applied Statistics*. The Lab is involved in our Consultation Workshop which a mandatory for students in the Statistical Methods track; graduate students are employed by the Lab; and consultation problems may develop into M.A. or Ph. D. theses or to a methodological research by faculty members.

(b) *Researching with scientists and graduate students in disciplines other than Statistics*. Generally, interdisciplinary research has become central in recent years and we believe in strengthening this direction by working with researches from a wide range of areas on problems that have methodological complexity. We have worked with researchers in Musicology, Education, Criminology, Political Science, Geography, Atmospheric Sciences and Medicine, to name a few.

(c) *Collaborating with organizations in the public and private sector*. Our clients include government ministries such as Education and Environment Protection, organizations such as the Israel Police and Schneider Children's Medical Center, and hi-tech firms. We believe that these collaborations contribute to the advancement of society.

3.2.3 To what extent do the structure, scope and contents properly reflect the main goals of the study program?

The purpose of the program is to present the students with the core issues in Statistics, to provide them with basic concepts and scientific tools in the various areas of Statistics, and to acquaint them with the possible applications of this field of study. Emphasis is placed on a scientific approach, and on broad core curriculum. The compulsory courses in the BA and MA programs achieve these aims. These courses lay the foundations for research planning and statistical thinking. The wide (and ever changing) variety of elective courses gives the students an excellent opportunity to expand their professional and intellectual horizons. To better prepare students for practice and applications, the department plans to replace the (2 credits) mandatory course "Statistical Laboratory" in year 3 of the undergraduate program by a 3 credits course in statistical consulting In view of the current vision on the future of statistics, the department plans to offers now electives in areas common to statistics and computing sciences (courses like Bayesian Networks).

3.2.4 Specify what bodies are responsible for the planning and managing of the study program. What are the mechanisms responsible for introducing changes and updating the study program, and how do they operate? If fundamental changes have been introduced into the program during the last five years, please specify what they are.

The Chair of the Department is responsible for planning and managing the undergraduate and graduate study programs. The Administrative Manager is responsible for the actual program offered each year, including the continuous administration of the programs, enforcing program rules such as prerequisites, enrollment for courses, and fulfillment of all program requirements.

A Teaching Committee is appointed, composed of the coordinators of the various areas. Changes in the program can be suggested by any teacher. Suggestions regarding the BA, MA and PhD programs are brought to discussion before the committee. Significant changes and reforms have to be approved at a department meeting of all faculty members. Once approved by the department, major changes also have to be approved by the Teaching Committee of the Social Science Faculty and the Dean. Decisions approved by these forums are implemented by the Administrative Manager, who is responsible for incorporating the changes into the curriculum.

In recent years, we have crystallized our MA program in official statistics. Jointly with the Central Bureau of Statistics, we designed special courses in sampling and estimation under special constraints (like complex sampling, and estimation in small areas). We have also revived and upgraded our consulting services now headed and managed by a senior academic faculty.

3.2.5 Describe the mechanism for coordinating and examining the contents that are in fact being taught, if such a mechanism exists.

The teaching committee and the department faculty examine and coordinate course content. In designated meetings, formal discussions among teachers of related subjects are encouraged and serve to coordinated the content of the courses and minimize overlap. From time to time the Department Chair convenes teachers of a certain subject to discuss the material covered; structuring the courses to make sure they cover all of the intended material. Most important, the department has established a joint teacher-student committee that meets bi-annually to discuss issues involving the curriculum.

3.2.6 In summary, to what extent the program has achieved its mission and goals? What are the strengths and weaknesses of the program?

The Department is quite satisfied with the MA, and PhD programs, which are based on providing a balanced education in leading areas of Statistics. We feel that both the theoretical and the practical curricula offered result in potentially remarkable young scientists and in non-negligible amount of cases in impressive statistical practitioners. In the last 8 years we have been experiencing a "golden age" in terms of numbers of graduate students. The growing number of graduate students stimulated the creation of new courses, and a special seminar dedicated to graduate students. In accordance with our view on the future of statistics, we hired young scientists to strengthen our Bio-Statistics track, to enhance and update our theoretical curriculum, and to develop strong linkage to computing sciences (especially in probabilistic learning). We have rebuilt our consulting service that is also significantly involved now it teaching and training students.

All our graduates who want to develop an academic career hardly have a problem finding post-doc positions abroad at excellent institutions. Our graduates that seek jobs in statistical practice hardly encounter problems finding a job.

The weaknesses worth mentioning are:

We are displeased with an important aspect of our under-graduate program.

In the far past, our location as a department in the faculty of Social Sciences was irrelevant to the level of students we had in the program. However, in the last 15 years we have been observing with growing concern the deterioration in the quantitative level of students admitted to the program. This reflects the unbearable neglect of mathematical education in all pre-college levels. On the one hand the academic management of the university does not want to compromise on the scientific level of professional education, but on the other hand does not encourage the reduction of the number students (even by increasing the admission requirements). Natural Sciences, where we could draw good students from are located in a different and relatively far campus (Edmund Safra).

We therefore made a great effort to develop (with some success) courses and programs to be taught at Edmund Safra- statistical theory, and a joint B.Sc program. About 4 years ago, we designed a unique 5-year joint program with Computer Sciences and Economics which is a Direct Track toMSc in Statistics, Economics and Computer Sciences. The idea was to select about 25 of the best candidates (the highest admission criteria in Computer Sciences in this case) and have them take that program. We hoped that the joint program will get (among other things) superb students exposed to statistics, and enrich our body of Ph.D. students both quantitatively and qualitatively. The program passed all academic and administrative obstacles but remain frozen because of severe budgetary constraint of the Hebrew University.

Is everything else peachy? In fact, the issue of student selection should come only in 3.4 here I would expect u to discuss only the program. If u want to mention the student-selection problem, refer the reader to 3.4.9, where u can describe it in length.

3.2.7 Are additional non-academic bodies involved in the running and the activities of the parent unit and study program? If so, what are these bodies and what is the mutual relationship between them and the leadership of the parent unit (for instance, the mutual relationship between the Business School and the Manufacturers' Association or industrial factories)?

The Department of Statistics collaborates with the Central Bureau of Statistics (CBS) in running the Masters track in Official Statistics. The CBS contributes some funds and assigns one senior instructor to teach a course in Official Statistics (usually in sampling and/or estimation).

3.2.8 What are future development plans of the unit/evaluated study program, and how they were decided upon?

The department of statistics plans to maintain its current teaching programs. As mentioned earlier (and also in ensuing sections), the department has recently discussed issues on the future of statistics, and decided to academically invest in areas that are common to Statistics and Computer Sciences. Consequently, we hired a leading tenure-track faculty in Probabilistic Machine Learning (Dr. Gal Elidan), who is teaching new courses in Bayesian Networks this year (among other, common courses in basic statistics). The Bayesian Networks course is now also an elective in Computer Sciences.

3.3 Teaching and Studying

3.3.1 Specify what teaching and studying methods are applied in the program: classroom lectures, self-study, distance learning, laboratories, seminars and pro-seminars, practical training, group exercises, role playing and simulations, organized tours, conferences and other methods. To what extent these methods are applied (% of the overall number of teaching hours, % of the overall number of credits).

The method of teaching a course and its size depends on the nature of the course and its objectives, the program of study (BA, MA, PhD), type of course (e.g., core course, research seminar, practice course), and the like. Compulsory courses in the BA program consists of 2-4 hour weekly classroom lectures, presented by a faculty member, of approximately 35-125 students; and 1 weekly hour of tutorial-discussion groups, in which teaching assistants (TAs) elaborate on issues presented in class to groups of 30-70 students. Students in these courses are required to submit weekly or bi-weekly assignments for which they receive feedback from the TAs. Core courses are of a similar nature, but are usually taught 2- 3 hours a week by a faculty member, with one TA. Elective courses in the BA program are mostly classroom lectures of 2 weekly hours, ranging from 10 to 35 students (with no TAs). Research seminars are mostly discussion courses with a smaller number of students, focused on research in a particular area. The assignment of a final seminar paper is mostly a self-study process, in which the student meets with a faculty member on a one-on-one basis to discuss the topic of the paper, decide on the reading material, the structure of the paper and the subtopics, and finally receive feedback for the submitted paper. The approximate distribution of hours in courses in the BA program is: Classroom lectures 90%, Seminars 10%.

Compulsory courses in the MA program are also classroom lectures taught by a faculty member (10-20) students), and accompanied by tutorial-discussion groups run by TAs. The nature of other courses in the MA program varies greatly, according to the area and the number of students admitted yearly to that particular area, as well as the objectives of the course. These courses include, once again, classroom lectures (15-20 students), seminars, tutorial and practice groups (4-6 students). The approximate distribution of hours in courses in the MA program is: Classroom lectures 85%, and Seminars 15%.

In the PhD program, students are required to participate in a PhD seminar during the year when they submit their dissertation proposal. This is a small discussion group of only doctoral students, who discuss their research plans, initial findings and their interpretation, and the like, with the help of the faculty member in charge of the seminar. Other than that, PhD students are required to complete an individual study program as determined by the student's advisor and advising committee.

3.3.2 What steps are taken to evaluate and improve teaching? How the results of these activities are used -- specifically, the unfavorable findings about staff members' teaching? Does the unit act to locate and encourage outstanding teachers? Does the unit and/or the institution offer the teaching staff regular and systematic activities, including courses/in-service training/instruction and guidance programs to improve the quality of teaching? Do new staff members receive special support?

The Hebrew University and the Department of Statistics place considerable importance on the quality of teaching. Students are asked to fill out evaluations for every course they take. In recent years the evaluation process was adapted for internet use, and all students of a given course can fill out the forms and submit them at their convenience using the internet. These evaluations are taken very seriously at the university and faculty levels. The compiled students' evaluations for each course are now available to students as part of the course description in the course catalog. Outstanding teachers are awarded commending letters from the Rector and the Department Chair, and their names are publicized by the university on Outstanding Teacher posters in each department. The best teachers are also awarded a Rector's prize for outstanding teachers. Service course are especially monitored to fit suitable instructors. This done by the chairperson together with the head of the serviced department.

A workshop is offered annually for teachers with poor evaluations from their students, in an attempt to improve their teaching skills. The Dean and the Chair follow up on such teachers and assess the improvement in their teaching. Teaching skills are an important factor in faculty promotion and are seriously considered by promotional committees for all levels of promotion. In cases of promotion with tenure, a senior teacher attends a typical lecture given by the candidate and submits a Teaching Skills Report to the promotional committee.

According to the regulations for appointments and promotions which were recently adopted by the University, new lecturers are assigned a mentor from the senior faculty, who assists them in the initial stages of their academic career. In addition, the Faculty of Social Sciences offers a short introductory course in teaching methods for new faculty. From time to time, the School of Education, together with the Rector's office, offers workshops open to all teachers to improve their teaching skills, and workshops to advance the use of technology (i.e., preparing PowerPoint presentations, advances in Office, etc.).

3.3.3 Describe the use of information technology in teaching and learning: methods, scope, types of course etc.

The use of information technology in teaching and learning is expanding rapidly. Below we list several examples for the use of technology in teaching, in ways that greatly aid both students and teachers.

- The on-line learning system, HighLearn, provides an easy way for setting up a website for a course. Almost all courses in the department have their sites on HighLearn. On the site students can access course material, including the syllabus, PowerPoint presentations, reading material (especially PDF files of assigned articles), and assignments. Some teachers use the course site for discussion forums, posting messages to students and receiving feedback.
- Access to E-journals, databases, on-line catalogues, book reservations, and the like is available on and off-campus using the Mount Scopus library database.
- The number of "smart" classrooms – equipped with multimedia devices – is continuously growing in the Faculty of Social Sciences. Such classes provide for the use of PowerPoint and overhead presentations, videotape and movie displays, and in-class use of internet resources.

- All students are provided with a university email account. Students' email accounts, together with SMSs to their mobile phones, are a common means of communication with the university. The entire process of individual study programs is completed on the internet. Students' evaluations of their teachers are conducted on the internet. Information about grades, class cancellations, schedule changes, and the like are sent via email and SMS services.
- A spacious 'computer farm' was recently established in the Faculty of Social Sciences, with hundreds of computers available for students, including associated services such as printers, scanners, etc. The computer farm includes a number of classrooms equipped with a computer for each student and a master computer for the instructor. Some discussion groups are conducted in these computer classrooms, such as in the statistics and research methods courses, the computer use course, and the course on the biological basis of Statistics.

Almost all courses have a website from which the course's learning material (syllabus, PowerPoint presentations, reading material, class assignments, etc.) can be downloaded. Most teachers use various computer-assisted presentations in their lectures, such as PowerPoint, videos and movies, PDF files, and sometimes the Internet. The demand for "smart" classrooms is growing.

3.3.4 Describe the policy of the study program/parent unit regarding attendance at lectures. What steps are taken to implement this policy? Please describe the current state of events in your answer.

According to the Hebrew University regulations, full attendance of students is compulsory at all lectures, discussion groups and all other activities. It is also the policy of the Faculty of Social Sciences and the Department of Statistics. However, whether and how to enforce this demand is at each teacher's discretion. In practice, the attendance rates are moderate to high in the large courses and most teachers do not strictly enforce compulsory attendance. Attendance is more readily enforced in smaller courses, i.e., seminars, lab work, applied courses, and advanced courses in the MA program.

3.3.5 Describe the methods used in the program to measure the students' achievements.

In most compulsory and core courses in the BA program, the final grade is based on the grade for the final examination. In some courses, the final grade also includes the average grade for the course assignments, and quizzes. In the compulsory courses, the students must submit a minimum number of assignments as a prerequisite for taking the final exam. In elective courses, especially in the smaller courses, there is a combination of a final exam and/or a course paper, or just a course paper. In fieldwork courses grades are based on active participation and contribution to research work. In the MA program, once again, the final grades in the compulsory and core courses are based on a final exam and/or a course paper.

3.3.6 Examinations

3.3.6.1 Describe the method of examinations and their character, the relative weight of each type of examination in the final grade (written/oral/open/multiple-choice etc.).

All the exams are written exams. The majority of the exams in compulsory, core courses, and in many elective courses, are in-class exams and at times are multiple-choice tests. The weight of the exam score in the final grade varies among courses. In many core courses the final exam constitutes 100% of the course grade. Some courses hold a midterm exam that may account for 10-30% of the final grade.

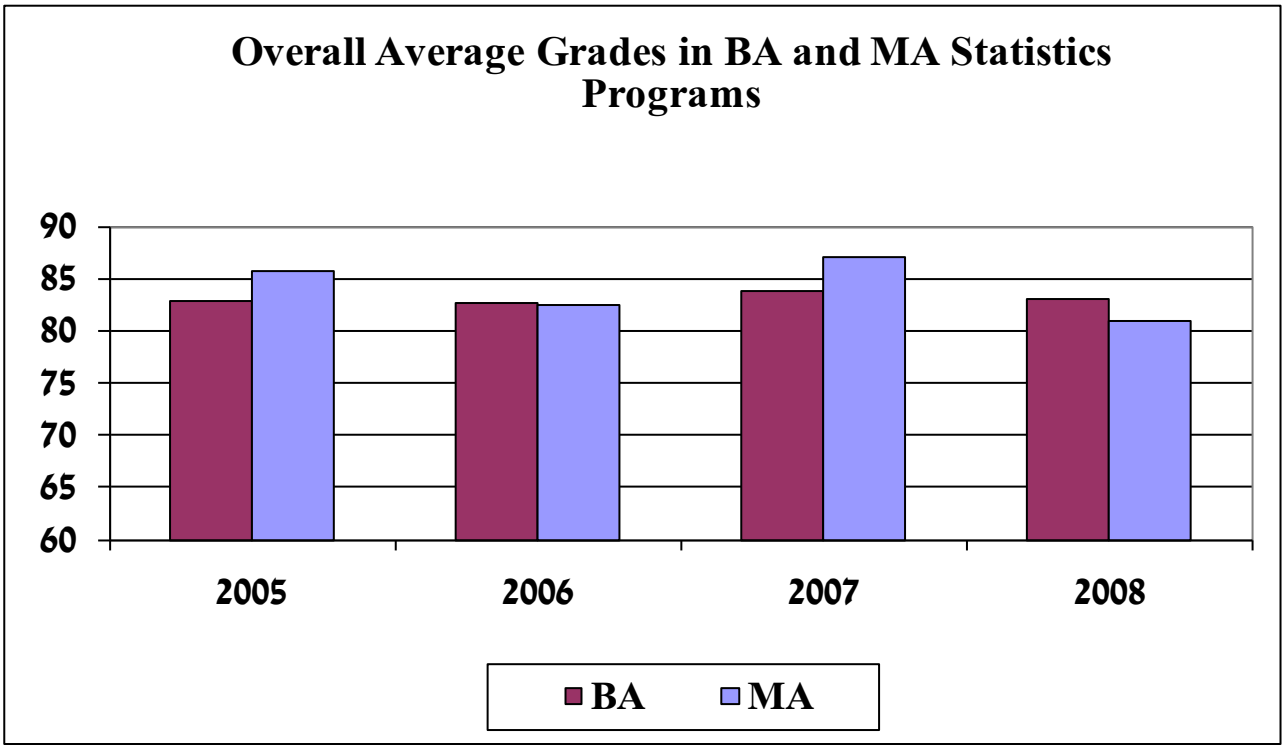
3.3.6.2 What is the distribution of the grades? Is it influenced by statistical considerations?

As in many other educational institutions and programs, we have experienced inflation of grades in recent years. In some courses the average grade is higher than desired, making it hard to distinguish the top students. It should be noted that according to the University's regulations (stemming from a law passed by the Knesset) every exam is offered twice (at first and second sittings), giving students the opportunity to improve their grades by taking the exam a second time.

At the moment, no statistical considerations are involved in giving grades. Because grade inflation is not a problem only in our department, this subject is also currently under discussion at the university-level teaching committee (NAHAL committee).

3.3.6.3 If the relevant information is available, please present (in the format of histogram) the distribution of the overall average grade of the graduates (not including the grade of the thesis for the Master's degree) for each of the last three years.

The following graph and table present the distribution of the overall average grades in the last 4 years, in the BA and MA programs.



		2005	2006	2007	2008
BA Program	Average	82.85	82.7	83.8	83.08
	N	28	23	30	39
MA Program	Average	85.64	82.41	87.01	80.94
	N	9	7	8	6

3.3.7 Written assignments (projects, thesis, dissertation)

3.3.7.1 Describe the types of written assignments and other projects required in the program, their contents and scope (seminar papers, degree papers, thesis, training period, practical training etc.)

3.3.7.2 What are the methods applied to evaluate written assignments and projects? What kind of feedback beyond the grade is given to the students for these assignments and projects?

There are several types of written assignment. Compulsory courses in the BA program are accompanied by weekly or bi-weekly assignments, to make sure that students have assimilated the new material and to encourage them to prepare for future classes. These assignments are turned in regularly, and are returned to the students with feedback (with or without a grade). Joint papers or assignments are not desirable, because they do not permit the assessment of each individual student's contribution. However, this is inevitable, because of the continuing cuts in the department budget, and the cut in the number of TAs per course. Many of the seminars, especially research seminars, require a written paper, which often serves as the sole basis for the final grade. The number of written assignments and their relative weight in the final grade is determined by the teacher and announced to the students in the syllabus. These written assignments demand individual efforts by each student, and are graded by the teacher.

All students in the BA program are required to submit a seminar paper. The goals of this assignment are to train students to focus on a particular topic, search for references, decide on the subtopics of the paper, and write the paper in a way that demonstrates understanding of the issues at hand, assimilation of the reading material, and writing skills. The grade is submitted by the underlying teacher who commonly provides a verbal feedback for the paper and the reasons for the grade.

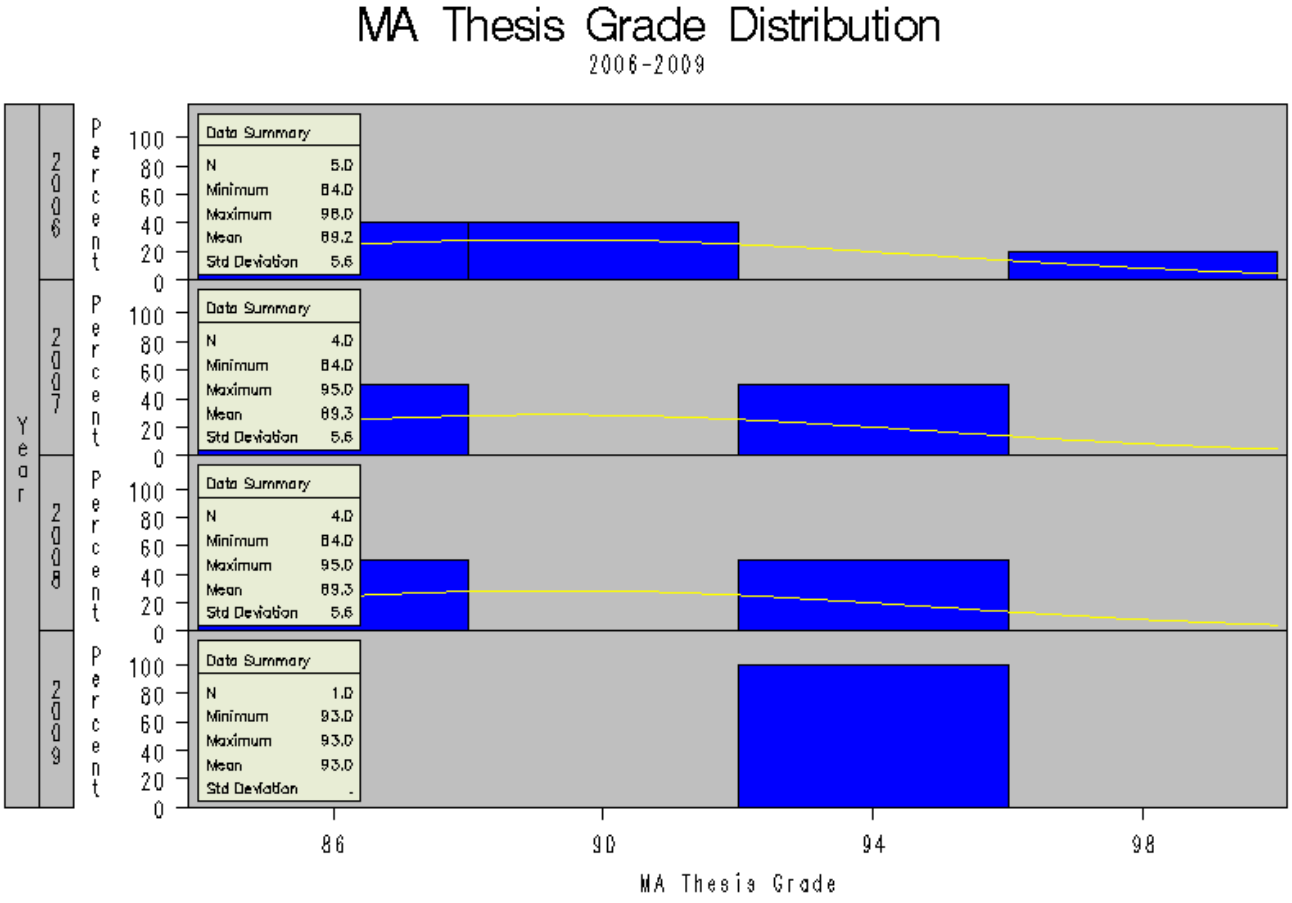
In the MA program students write one compulsory seminar paper and are offered some elective seminars as well. The papers are evaluated by the faculty member who instructs the seminar and commonly provides a verbal feedback for the paper and the reasons for the grade.

The Department of Statistics offers an MA track with a thesis and a track without a thesis. The MA thesis is a research project carried out by individual students and supervised by individual faculty members, and is intended to demonstrate the student's ability to carry out a research work. A sufficient requirement for an MA thesis is that it is a very good summary of an area in Statistics or in Operation research. In many cases students are offered by their advisors (and almost always accept) some methodological challenges in a form of an open problem in addition to the summary of the underlying area. The summary of the area and the solution of the problem constitute the thesis.

The written thesis is evaluated by the thesis advisor and another faculty member appointed by the Department Chair. This second reader may suggest or require revisions and indicate whether or not these revisions will affect the student's grade. Reviewers provide a full written evaluation on a specific form that they have to fill out, as well as a numerical grade. The final grade on the written thesis is the average of the grades given by the advisor and second reader. In general, we are quite satisfied with the quality of our MA theses. Some of them have been published in the professional literature and some of them have served as the basis for a follow-up dissertation.

As described above, the PhD program at the HU is administered by the Authority for Research Students, which sets very high standards for doctoral dissertations and is responsible for the evaluation of the dissertations.

3.3.7.3 What is the average grade given to the graduates of the program in the final project/ final seminar/thesis in each of the last three years. Please present (in the form of histogram) the grade distribution of the final project/final seminar/thesis.



3.3.8 Describe any other methods used to measure the achievements of the students used by the institution

See next section

3.3.9 In summary, to what extent the methods applied to measure the achievements of the students present a true picture of students' abilities? What are the points of strength and weaknesses of the methods of evaluating the students' achievements?

Although no form of assessment is foolproof, we believe that the assessment methods used in the Department to measure students' knowledge and skills provide an accurate picture and are therefore satisfactory. Most of our exams meet common criteria of reliability and validity. Seminar courses generally use a combination of an exam with a term paper, or just a paper, to assess students' achievements. Students are also required to submit a seminar paper in both the BA and the MA programs. These are supervised assignments that provide an opportunity to assess the students' ability to cope individually with scientific material, their thinking processes, and their writing skills. In clinical and applied courses in the MA program other methods of assessments are used, including reports from practice supervisors. Thus, we feel that the assessment methods we use are effective.

Weaknesses: Students often argue that they would prefer open-question and/or open book exams, in which they feel they have a better opportunity to express themselves and demonstrate their knowledge. This is unlikely to happen, in basic compulsory courses with high registration (approximately 100s students in a class) and the small number of TAs we can afford to hire. For the same reason, assignments in several courses are done in small groups of 2-3 students. This precludes individual assessment, as it is impossible to distinguish each student's contributions.

3.4 Students

3.4.1 What are the program's admission criteria, selection and admission procedure, and criteria of advancement from year to year and for graduation, including the requirements for obtaining an academic degree? Is there a policy of affirmative action and standards for the admission of candidates with special needs? If such policies and standards have been established, please describe them. How the admission criteria are decided upon, and to what extent are the criteria and procedures for admission related to the aims of the program? What have been the lowest admission criteria (psychometric score and matriculation grades) the candidates must meet?

Undergraduate studies

Conditions of Admission to Undergraduate Studies in the Department of Statistics

- Entitlement to the Israeli Matriculation Certificate ("Bagrut" Certificate)
- An appropriate score on the Israeli Psychometric Test.
- Knowledge of the English language – meeting the University's minimum requirements (Level 3).
- Knowledge of the Hebrew language – meeting the minimum language requirements for students whose did not attend a Hebrew-language high school.

These conditions apply to all candidates for entering the University, with the aim of identifying and admitting candidates with the greatest chances of succeeding in their studies.

Admission Procedure

- Admission is based on an adjusted calculation of the Bagrut Certificate score and the Israeli Psychometric Test score. Candidates with the highest calculated average are accepted, according to the number of places available. The admission requirements may change from year to year.
- Previous studies – Grades achieved in other academic programs (such as the Hebrew University or Tel Aviv University preparatory programs (Mechina) or previous academic studies) may be substituted for the Bagrut score in the adjusted calculation. If a student has several academic achievements, the highest grade is used in the adjusted calculation.
- Students from abroad are required to hold a high-school certificate equivalent to the Israeli Bagrut Certificate, a certificate of studies in a Mechina (Hebrew language) program, or academic studies from their native country. The Mechina programs at any of the universities are accepted as providing equivalency to the Bagrut certificate in the absence of that certification. The student's final grade at the Hebrew University's Rothberg International School is calculated together with the Psychometric Test score. Other Mechina programs only entitle equivalency to the Bagrut certificate, but the grade is not taken into account; and the student's weighted grade is calculated solely on the basis of the psychometric grade. There is no differential admission threshold for candidates from abroad. These candidates are required to meet the same criteria as the Israeli candidates.
- A candidate may request admission to a maximum of four fields of study, according to personal preference. The admission procedure follows the order of preference listed in the registration form. If a candidate's first preference is Statistics and the candidate is accepted, then his/her qualifications are reviewed to determine whether s/he can be accepted to his/her second choice, provided that it is compatible with Statistics in the dual-major track. If so, further options are not checked. If a student is not accepted by his/her first preference, then his/her suitability for the second preference is reviewed, and so forth. If the decision regarding a student's admission to the first preference is still pending, then the suitability for the second preference is reviewed.

Affirmative Action has been applied at the Hebrew University since 2001 in all academic departments. Applicants who are eligible for personal advancement, based on criteria set by the Association for Educational Advancement, can be accepted even if their weighted score is slightly lower than the department's admission cutoff grade, and according to the allocated number of vacancies.

Applicants with special needs (impaired vision, blind, hard of hearing, etc.) are permitted to take the psychometric exam under special conditions according to their situation. Should those applicants fail to meet the regular admission requirements, they will be eligible to submit an appeal to the Board of Appeals. The conditions for progressing from one year to another and completing the studies and to be eligible for a degree are detailed in the school bylaws (http://www.huji.ac.il/huji/adm_rules.htm).

Acceptance of candidates with special needs

Candidates with disabilities (visually impaired, blind, or hard of hearing) may be administered the Psychometric Test under special conditions, based on their specific disability. If they do not achieve the required acceptance criteria, then their request is evaluated by the Appeal Committee.

Statistics on registration, admission, and students, by degree and year

This information is based on 5 years: 2005-2009

Degree	Group	Year				
		2005	2006	2007	2008	2009
BA	Candidates	219	289	310	290	347
	Accepted	130	186	190	166	180
	Studied	61	74	86	66	72
MA	Candidates	36	34	31	37	37
	Accepted	20	20	12	22	21
	Studied	10	16	7	16	10

Averages of the Bagrut and psychometric exam scores for accepted students, and for students who began their undergraduate studies in Statistics, by year:

Group	Data	Statistics	Year				
			2003	2004	2005	2006	2007
Accepted	Bagrut	Mean	10.18	10.04	9.98	9.94	9.91
		SD	0.63	0.62	0.61	0.66	0.61
		n	92	145	141	125	136
	Psychometric	Mean	624.5	633.9	616.7	606.2	618.0
		SD	63.2	55.8	63.8	66.3	55.6
		n	127	181	177	158	173
Attended	Bagrut	Mean	10.01	9.96	9.84	9.85	9.69
		SD	0.62	0.63	0.58	0.67	0.61
		n	43	58	65	43	50
	Psychometric	Mean	626.5	635.2	615.9	604.5	616.5
		SD	65.7	62.0	58.0	66.0	52.4
		n	58	72	80	64	69

(*) The group sizes seem to differ within this table and the previous one. This reflects missing data for individuals with different background

Psychometric score required for admission, according to Bagrut average and year

Year	Bagrut average	Minimum Psychometric Score for Admission Statistics
2004	10.0	520
	10.5	460
2005	10.0	520
	10.5	460
2006	10.0	520
	10.5	460
2007	10.0	520
	10.5	460
2009	10.0	520
	10.5	460

* The range of the Psychometric Score is (400-800)

Criteria for advancement in the undergraduate program

- The criteria for advancing from year to year are as specified by the Faculty of Social Sciences. A student must achieve a minimal grade of 55 to pass a course. The prerequisites for each course must be met before a student can enrol in the course.
- Exemption from the language requirement by the end of the first year, in English (minimum grade of 70) and/or Hebrew (minimum grade of 75).
- The criteria for completion of the degree are passing grades in all the required courses. Students with a double major must complete 65 credits in statistics courses, while students with a single major must complete 69-75 credits.

Graduate studies

Conditions for acceptance to the program

Registration for the MA program is open until the opening of the next Academic year, both in the first and second Semester). Students who meet the requirements may choose to put together a personal program, which will be dependent on the approval of the Area Coordinator.

Students with a BA or MA from another department who would like to get an MA in Statistics in one of the applied areas have to be accepted into a one year 'Completing' program (Limudei Hashlama) for graduate studies in Statistics, which includes the undergraduate studies with coordination with the MA counsellor, and the student must complete the program with an average of 75.

Admittance

Students will be admitted to graduate studies in either Social Sciences or Natural Sciences upon receiving an undergraduate degree as described below.

Social Sciences (M.A.):
Students will be admitted to graduate studies in Social Sciences upon receiving an undergraduate degree from either the Social Sciences or the Natural Sciences faculties, with a final average grade in Statistics of at least 75 and a final average of at least 65 in the all courses taken in their undergraduate degree. Students who did not study Statistics and finished with at least a 75 final average in at least one of the tracks in the undergraduate degree can be admitted to Graduate Studies by the Graduate Student Advisor and the fulfillment of courses in order to begin the Graduate Program.

Natural Science (M.Sc.):
Students will be admitted to graduate studies in Natural Sciences upon receiving an undergraduate degree from one of the Natural Sciences Faculties, with a final average grade in Statistics of at least 75, if the curriculum in the degree encompasses the minimal requirements of the Statistics Department, (See Section 1 above). A graduate of another faculty or a different institution can be admitted after the Natural Sciences Teaching Committee has ruled favorably on the matter. If required the student must complete missing courses from the previous degree. In all cases listed above, the student is required to have the correct mathematical background for the curriculum that is taught in the Natural Sciences Faculty.

Criteria for completion of graduate studies
The types and number of courses depend on the particular area. Graduate studies toward the MA degree include general required courses that are common to all the areas, required and elective courses within each area, at least two seminars with a seminar paper, and a Master's thesis for students on the research track. A comprehensive list of the Graduate Study courses can be found in the Appendix.

Graduate program for the PhD degree

Program leading directly to a PhD degree

The graduate program that leads directly to a PhD degree is intended for a small number of outstanding students who will be chosen at the end of the first year of graduate studies. Students who begin this program are required to complete the first phase of their MA program in the area to which they are accepted, and submit a proposal for a doctoral thesis by the end of their third year. In the second phase they take advanced courses for the PhD and complete their doctoral thesis.

Conditions for acceptance in the program leading directly to the doctorate for students who are completing their first year of graduate studies:

- Completing 20-24 credits (according to the details of the specific area
- An average grade of at least 90 in the graduate courses.
- Two recommendations – one from the student's supervisor for the seminar paper.

Program requirements

Students must complete all their courses and seminars for the MA and register at the Authority for Research Students (pending prior approval by the Department of Statistics).

To help students choose a topic and a supervisor for their doctoral thesis, there is a yearly seminar for students in the direct program, which presents them with the research fields and programs which they can join for their doctoral research. All students in the program are required to participate in this seminar during the year in which they are writing their proposal.

Submitting the doctoral proposal

Students who enter the direct program at the end of their first year of graduate studies have to submit their proposal for a doctoral thesis to their committee within two years of their acceptance to the program.

When the proposal has been accepted and all the requirements for the MA have been completed, the student may obtain a certificate of completion of the MA requirements (with the authorization of the Department of Statistics).

Students who do not submit their doctoral proposal in time will have to leave the direct program and complete their studies as regular MA students.

Awards, Scholarships, and Employment Opportunities:
The Department of Statistics awards scholarships to Undergraduate students who excel academically. Many Graduate and Research grant students are employed within the Department as teacher assistants,

Employment Opportunities

A portion of the graduate students are employed within the Department as teacher’s assistants. Assistants review and grade assignments given to undergraduate students, in addition the teacher’s

assistants can teach the exercise lessons of the course. Assistants receive an exemption from tuition payment equal to hours worked in the position. Those interested in the teacher's assistant position may speak with the administration of the Department.

3.4.2 To what extent is the relevant information concerning the courses in the program available to the students, e.g. syllabuses (with bibliographies specifying required reading, exercises and assignments, and the components of the final grade) and collections of previous examinations? How is this information brought to the attention of the students, where is it published and how are the students updated on changes to it?

Each course is listed in the Faculty's course catalogue, which has been posted on the University website since 2005, several months prior to the beginning of the academic year. The publication of the updated catalogue is the responsibility of the Faculty and is monitored by the department. A short description of the course content, course type, credits, course requirements, the way the final grade is determined, and examination dates are all available on the site. The grade policy, reading list, exercises and assignments are determined by each teacher. They are made known to the students in the first lecture of each course and are posted on the course website. Changes to any of the above are immediately made known to students in the particular course via direct e-mail and SMS services. Some information is also posted on the department bulletin board. Teachers also post PDF files of the required readings on the course site or on their own personal website.

The Hebrew University also makes use of a computational learning environment called HighLearn. It is accessible via the internet and allows the teaching staff to organize courses in an efficient manner. It increases the accessibility of information, allows the presentation of diverse updated information, and facilitates bidirectional communication between students and teachers.

The department secretaries give the student's union all exams that are given in the department and the union keeps a catalogue for the student's to photocopy.

3.4.3 What has been the yearly dropout rate of students from the program over the last five years, and what are the reasons for their leaving (academic/financial/other)? Is the drop-out rate considered normal? If not, what steps is the unit taking to prevent, reduce or increase this rate?

The dropout rate of BA and MA students is presented in the following table.

Degree	Year	2007	2008	2009
Bachelor's	After 1st year	0.50	0.50	0.50
	After 2nd year	0.10	0.10	0.10
Master	After 1st year	0.05	0.05	0.05

The unusual dropout from year 1 to year 2 in the undergraduate level is attributed to few reasons: First and foremost is the fact that a lot of students (well over 30%) enrol to Statistics as means to get admitted into Economics. Admittance criteria to Economics are higher than in Statistics, and there is a back-door opportunity for students that are not admitted to Econ. If they enrol in Stat, and get and average grade of at least 80 (out of 100), they can be admitted to Econ. The other reason for the significant dropout is that some students are so badly mathematically prepared, that they find themselves failing exams.

3.4.4 To what extent are the students involved in the staff members' research projects? Specify which projects, the number of students involved and the scope of their involvement. Is there a procedure for encouraging students to carry out independent research of their own?

Undergraduate students are generally not involved in faculty's research as the research is theoretical and requires tools that the students don't have. Occasionally, exceptionally good and inquisitive students are identified in year 3, and some faculty invite these students to join their research.

In the graduate level, we have a formal mandatory seminar where faculty expose students to their research. This serves two purposes: to enrich the students' knowledge, and to provide an avenue for students to choose advisors for their theses.

3.5 Counselling systems

3.5.1 Describe the system of academic counselling for students before and during their studies (including the structuring and approval of the curriculum). Do students with special needs receive special support? If so, please specify.

BA Program

Students who are about to begin their undergraduate BA studies are referred to the BA counsellor for information regarding the BA and advice on structuring their curriculum. The BA counsellor also helps find solutions for students with special needs, mostly by directing them to the appropriate faculty and university services, making sure they receive the support they need. This includes, for example, directing students in need of psychological support to the university psychological-counseling services, directing blind students to the Center for the Blind where they receive help and guidance, etc. The counselor also makes sure that students with language difficulties or learning disabilities receive the adjusted conditions they are entitled to (e.g. special exam conditions, a reader and/or a writer, extra time).

MA Program

MA students consult with the area coordinators before and during their studies to receive guidance regarding their program, including special requests. For example, students wishing to take courses from other departments may do so with the approval of the MA counsellor.

Students with special needs

There are a number of facilities available for Hebrew University students with special needs. A detailed list of these facilities follows. This description is available for students on the Web (Hebrew University homepage http://www.huji.ac.il/ and click on Information for Students – Dean of Students Office or direct link: http://studean.huji.ac.il/).

- Students with physical disabilities: In 2003 the Hebrew University began implementing a long-range plan to render all campuses accessible to students with physical disabilities. Currently, construction has been completed at the Mt. Scopus campus, where appropriate pathways and elevators were added to accommodate wheelchairs and enable handicapped students access to public facilities, lecture halls, seminar rooms, laboratories, computer facilities, libraries, toilet facilities, cafeterias etc. The plan will be extended to other campuses when funds become available.
- Students with learning disabilities: Professional personnel provide individual and group counseling and tutoring for students with various types of learning disabilities. The university provides a unique learning environment, which is aimed at helping learning-disabled students maximize their academic achievements.
- Blind students and students with impaired vision: The HU houses a unique study center for blind students and students with impaired vision. The center provides sophisticated instrumentation, including an audio library and specially designed computers which are available both at the center and on long-term loans for home and classroom use. All computer facilities are equipped with special software programs. Private tutoring is available both for academic needs and orientation around the campus.
- Students with hearing disabilities: Special audio equipment is available for long-term loan. If needed, tutors, photocopies of study material and other aids are provided. Several lecture halls on Mt. Scopus are equipped with special hearing aids.

- Psychological counseling: Counseling by experienced personnel is available on all campuses for HU students requiring help with personal crises.
- The Computer Centers on the Mount Scopus campus are accessible to physically handicapped people. The main computer center is equipped with a stair lift, and there is a direct passage between the main computer center and the center for the blind. In the second computer center, which is situated all on one floor, there is a ramp which leads from the entrance to the computer area. Also, there is direct access to the center from a parking lot. All the computers at both of the Mount Scopus computer centers are equipped with special software to assist students with disabilities. Zoom Text is a program to assist vision-impaired students. Please Read enables the computer to read the text aloud. A Word tool called Dyslexia contains special editing features for dyslexic students.
- In the Central Library of the Mount Scopus campus, all areas are accessible to the handicapped by ramps and elevators. A new worksite for people with disabilities is located in the reference department.
- Students in reserve duty: Students called up for reserve military service during the academic year are provided with assistance to bridge the gap of missed class hours (flexibility regarding deadlines, authorization for additional dates for examinations, and coupons for photocopying class notes).

All Statistics students may benefit from the various facilities provided by the university, as most of the facilities listed above are available at the Mt. Scopus campus.

3.5.2 Are counselling and assistance provided to students to help them with possible directions for their future professional careers? If so, describe these procedures. Are there work placement services for the graduates? If so, please describe them.

We don't provide official counselling to our students on directions of their future careers. On the other hand, the MA couseller is always open to advise students on future career issues

3.5.3 What are the mechanisms that deal with students' complaints?

Several mechanisms in the department deal with students' complaints:

- Each lecturer is required to hold office hours during which the students can discuss the academic material and / or other issues that might arise.
- Students can turn to the BA Counselor with their problems or complaints, which are forwarded to the relevant authority (head of department, teacher, administrative coordinator, faculty offices, etc.).
- An open-door policy is customary in the case of the office for student affairs. Complaints are referred the relevant body. If a problem is not resolved satisfactorily, the student can appeal to the head of the department.
- The university performs an annual survey to assess students' opinion about the quality of the teaching and administrative services. This mechanism allows the department to identify problems and complaints, which are dealt with to the best of our ability.
- The Teaching Committee deals with academic issues, including course curriculum, overlapping material, teaching rules, exam regulations, exam scoring, etc.
- The Teacher-Student Committee is another forum in which students can raise their complaints. The committee is made up of student representatives from each year of the BA and MA programs, the Head of the Department, teacher's representatives, the BA advisor and Administrative Coordinator.

3.5.4 Does the unit take steps to locate outstanding students (including Phd candidates) and reward them? If so, describe these procedures. What financial assistance is provided to students with financial problems and/or outstanding students?

The Hebrew University and the Faculty of Social Sciences offer special rewards to outstanding students based on their academic achievements. Students on the Rector's list or the Dean's list are granted fellowships encouraging them to complete their studies at HU.

The department has no resources to support outstanding students in the BA or MA programs. However, given our VERY high rate of winning competitive grants, a large percent of our faculty offer outstanding Masters and Ph.D. students part-time jobs as research assistants

Every student is entitled to apply for financial aid. The Student Financial Aid Department (SFAD) grants financial aid based on financial status, academic achievement and/or other criteria related to specific funds. Freshmen are evaluated according to their university admission data. Students who are borderline candidates for scholarships are offered a loan at preferential terms. Information on all of

the above can be found on the university's website, including deadlines for the submission of applications. The information is also prominently published on the bulletin boards. Application forms are available from the schools' academic secretaries, at the SFAD office and on the website

3.5.5 Does the institution and/or the parent unit maintain contact with their graduates, the graduates' employers, and the employment market? If data are available, please specify the degree of integration of graduates into the labor market (which is especially relevant for programs in professional fields). Where have they found employment, what positions do they hold, how much time elapses between graduation and employment, and how many students continue their studies to advanced degrees or in other areas (specify area of study and degree level)? Please supply the data on the number of graduates who have completed their studies with distinction. Any relevant survey of the unit/institution on this matter could be provided.

The department does not maintain formal contact with its graduate students. However, the Alumni Association of the Hebrew University is in the process of being restructured, and will hopefully provide this important service.

Graduates of the Statistics department have obtained tenure-track positions at some of the most distinguished academic institutions worldwide.

Percent (%) of students who graduated with honors:

BA students	**2005**	**2006**	**2007**	**2008**	**2009**
Cum Laude	3.70%	10.71%	0.00%	13.33%	10.26%
Summa Cum Laude	0.00%	3.57%	0.00%	6.67%	0.00%
MA students					
Cum Laude	0.00%	11.11%	14.29%	25.00%	0.00%
Summa Cum Laude	0.00%	0.00%	14.29%	12.50%	0.00%

3.5.6 In summary, what are the strengths and weaknesses of the issues specified above?

As mentioned earlier the department is relatively pleased with its graduate students but much less pleased with its undergraduate students. While we try to single out excellent students and nourish them academically, we feel that if we were given access to students in Natural Sciences, we could do MUCH better.

3.6 Human Resources

3.6.1 Teaching Staff

3.6.1.1 Describe the profile of the program's teaching staff in the format of Tables 2a through 2d (pages 15-17). What are the areas of specialization of the staff in relation to the requirements of the program? To what extent does the staff profile enable flexibility and dynamism within the program?

The academic staff of the Department of Statistics consists of the following categories of teachers (for the school year of 2008/09,

- Tenured and tenure-track faculty members (13).
- PhD-level graduate students (12)
- MA-level graduate students (40)
- Retired academic faculty who research (7)
- External lecturers (1)

3.6.1.2 What specializations and skills (including experience and training) are required of the staff members teaching in the program, including those who teach practical courses? Are their research areas related to the study program (e.g. do the staff members teach special courses that are related to their areas of research or to areas in which they have gained a reputation)?

Teaching responsibilities are allocated based on the faculty members' fields of expertise, while taking into consideration both their preferences and the department's teaching needs. A tenured or tenured-track faculty member is typically responsible for teaching a large required course in his/her general area of expertise, and smaller, more advanced courses/seminars in his/her specific research area. External lecturers are hired to teach in their respective areas of expertise. Outstanding graduate students serve as teaching assistants in required courses in their area of specialization. Their main responsibility is to help in composing and grading exams and to provide one-on-one tutoring during office hours.

3.6.1.3 What steps are taken to ensure that staff members are updated, academically and professionally, with regard to the program?

All faculty members of the Department conduct cutting edge research in their respective fields (see Chapter 4). They all participate in (and often organize) international conferences. Most take sabbaticals once every few years to maintain their international contacts, make new ones, and expand their research interest. As for the very few external teachers we employ, they keep in strong touch with our department, attend our seminars, and occasionally conduct joint work with our faculty. This gives us an excellent means to closely monitor their professional level.

3.6.1.4 What are the rules, criteria and procedures for appointing the program head and the staff, including tenure and promotion, the standard duration of service at each level, renewal of appointment in elected positions and dismissals? Are you satisfied with these procedures?

The department chairperson is appointed for a period of 3 years with an optional fourth year. The chairperson is a senior faculty member elected by the General Assembly of all teachers in the department, based on recommendations made by a search committee (consisting of the last three chairpersons).

Decisions concerning tenure and promotion are based on the quality of the individual's research, as well as teaching evaluation and contribution to the institution ("citizenship"), using the standard procedures of the Hebrew University as they appear in the published rules (attached). The important criteria for promotion are, first of all, quality academic publications and research grants. Teaching performance is also one of the criteria used in the tenure procedure. It is also an important factor in determining promotions.

The procedure and criteria for recruiting academic staff are described in 3.6.1.8 below.

We are satisfied with the appointment and tenure procedure.

3.6.1.5 What is the definition of the position of the program head? What credentials (experience and education) are required for this position?

The Chairperson of the department is a senior faculty member, typically at the rank of full professor or associate professor. Chairpersons usually have prior experience in departmental, faculty, university-level committees and are familiar with the university's institutional structure and procedures. The department chairperson is appointed for a period of 3 years (with an option of 4 years) by the General Assembly of all the teachers in the department, based on recommendations made by a search committee (consisting of the three senior faculty members).

The chairperson appoints three advisors, an MA counselor, a BA counselor, PhD counselor, and an advisor for each of the MA programs. Typically, the advisors are Senior Faculty Members and their functions are: (1) to assist them in choosing curriculum and to approve changes in the curriculum, (2) to offer advice regarding and academic problems.

The chairperson also appoints coordinators for the various areas in the department. These coordinators are responsible for the operation of each area's program.
Three major committees are headed by the chairperson:

A. The Program/Teaching Committee. The chairperson appoints this committee, which consists of the directors of the various areas (programs) and the department's administrative director. This committee meets several times a year, as much as needed.
   Its major functions are:
   1. To examine and approve changes in the curriculum of each program.
   2. To approve new courses offered by members of the department, after which the new courses are approved finally all faculty members.
   3. To discuss all matters regarding courses and/or teaching in the department.

B. The Recruiting Committee. The members of this committee are elected by the faculty (up to six members can be appointed by the chairperson, one of them from the Department of Public Health). It has the responsibility of screening and selecting potential new faculty, both junior and senior, and preparing their files for further evaluation by the Faculty of Social Sciences committee. In addition, the chairperson consults with this committee on major academic issues and other departmental matters on an ad hoc basis.

C. The Teacher-Student Committee. This committee consists of the chairperson, the BA and MA advisors and 1-2 student representatives from each of the three years of the undergraduate and MA programs. The committee meets to discuss and solve problems raised by the student representatives.

3.6.1.6 How is full employment defined in the institution for senior and junior staff, and how many hours is each of them required to teach in each of the study programs?

- Department Faculty members in the Faculty of Social Science teach 12 annual credits, i.e., six teaching hours a week per semester.
- Teaching assistants (PhD students) may tutor up to 22 weekly hours or give classroom lectures up to 8 weekly hours (full-time position).
- Teaching assistants (MA students) may tutor up to 22 weekly hours (half-time position).

3.6.1.7 Are staff members obliged to serve as advisors for final projects, theses and dissertations? Are there criteria for assigning advisors to these papers and projects?

Staff members are obligated to serve as thesis advisors. The number of MA and PhD students supervised by each faculty member is monitored on a regular basis. Once a faculty member agrees to serve as a thesis advisor, he/she is obligated to see the student through to the end of his/her degree.

3.6.1.8 What is the policy regarding recruiting and absorbing teaching staff (senior as well as junior) and what are the plans for the future recruitment to the program under evaluation? How are these plans made and by whom?

New recruits are selected for both their individual excellence in research and their fields of expertise. Recruiting plans are made by the chairman of the department through consultations with the recruitment/development committee, and are outlined in a five-year development program. All candidates are evaluated and ranked according to their overall achievements. The merits of the candidates are discussed by the committee that decides which of the highest ranked candidates to present to the Faculty of Social Science committee for further evaluation. The choices of the Faculty-level committee need to be approved by the rector and the president. It is our department policy to maintain excellence in a broad range of fields in Statistics. This policy guarantees our ability to provide high-level courses and supervision in a broad range of fields. The teaching record and experience of new faculty recruits are important (but generally not decisive) factors in deciding whom to recruit. Prospective candidates present their work at the department seminar, and their performance in this forum has an important role in the recruiting decisions. Once recruited, new faculty members are offered a short course in teaching techniques administered by the Rector's Office. It is the

University's policy that new teachers are hired for a trial period of four years (which can be extended up to six years). Their teaching performance and quality of research are considered to determine their acceptance as tenured members of the university staff. These factors are also important in determining promotions. In particular, it is not rare that promotions are held up or even denied due to a poor teaching record.

3.6.1.9 Describe the technical and administrative staff, including the number of staff members and their job descriptions. What kind of support does the technical and administrative staff provide for academic activities?

The administrative staff consists of two administrative positions: the Department Administrative Manager (Ms. Rachel Bankir), the Students' Affairs Secretary (Mrs. Clare Pagis).

The Departmental Administrative manager is responsible for:

- The general management of staff and offices
- Preparation of the department's course catalogue
- Preparation of the teacher's yearly teaching schedule, taking their credit obligations into account.
- Management of the department's budget, including external funds.
- Representation of the department when dealing with faculty and university authorities.
- Management of the appointments of junior academic personnel and administrative staff.
- Management of scholarships (students and guests).
- Hiring of teaching assistants and supervisors, and their job assignments.
- Maintenance of the teaching equipment, offices, laboratories, etc.

The responsibilities of the Students' Affairs Secretary and her assistant include:

- Providing information and guidance for BA, MA, and PhD students, regarding student affairs and the course catalogue and program.
- Correspondence with potential students.
- Overall coordination of the student exams.
- Verifying prerequisites for courses

Verifying BA and MA entitlement and completion of the requirements

3.6.1.10 In summary, what are the strengths and weaknesses of the human resources (teaching staff, technical and administrative staff)?

Strengths: Our diverse and relatively large teaching staff enables us to offer a wide range of courses (both basic and advanced) in all major fields of Statistics. .The research grants obtained by our faculty enables us to educate a large number of doctoral students, many of whom can later be found in the best schools in Israel and abroad .

Administrative staff: Our administrative staff excels at their jobs and has been ranking at the top of the students satisfaction surveys.

Weaknesses: The department is facing a massive retirement by 2013. Applied statistics is going to be critically affected by this retirement. Although we have been engaged in recruiting, the budgetary constraints pose a severe threat on our recruiting success.

At the administrative level, our staff is too small. We believe that the complexity of the Statistics Department, offering service courses to about 2000 students a year requires some significant extra administrative help.

The teaching workforce (senior and junior teaching staff employed, external senior and junior teaching staff, teaching and research assistants, post-doctoral staff members) in the format of Tables 2A through 2D (in chapter 6 of this document, pages 15-17).

3.7 Infrastructure

In this chapter, describe the overall physical infrastructure that serves the unit and the program under evaluation. To what extent does this infrastructure enable the parent unit to operate the study according to its aims and goals?

3.7.1 Administration

3.7.1.1 What is the physical location of the unit in the institution, in which building it is located, and where does the program under evaluation operate? Do other programs share the building?

The Department of Statistics is located on the Mount Scopus campus, in Wing 4 Faculty of Social Sciences building, in floors 3 and 4.

3.7.1.2 What is the location of the main office/administration of the parent unit? Does the program under evaluation have a separate main office?

The main office of the Social Science Faculty is located in Wing 4 of the Social Science Faculty building, 3rd floors.

3.7.1.3 How many rooms serve the academic staff (senior, junior and external) and technical staff of the program, and what standard equipment is available in each room?

The academic staff has 20 individual offices for senior faculty members. There is a one-room library which serves as the seminar room (containing periodicals and books), one computer laboratory for graduate students equipped with 5 computer stations, 4 individual rooms for doctoral students.

The main office has 4 rooms, one for the chairperson, one for administrative purposes, and one for students' affairs. An additional room serves for storing audio-visual equipment, such as teaching aids, DVDs, VCRs, TVs, and overhead projectors, and department mail.

The offices of the academic staff are equipped with computers connected to the University Ethernet system. Support for problems with software such as MS Office and Windows is given by the Computer services located in Wing 1 of the Faculty Building. Equipment for the administrative staff (printers, FAX machines, and the like) is purchased by the department and maintained by the Faculty of Social Sciences.

3.7.2 Classes

3.7.2.1 How many classrooms, seminar rooms, rooms for group activities, and auditoria serve the study program, how many seats do they have, and what equipment can be found in each room /classroom/auditorium (including reference to the possibility of using laptop computers on campus).

The Department of Statistics, as part of the Faculty of Social Sciences, uses classrooms which belong to the Faculty. The Faculty has 43 classrooms: 7 lecture halls with the capacity for 100-350 students, all equipped with audio-visual equipment (computer, projector, etc); 13 classrooms with the capacity for 40-100 students, 5 of them fully equipped with audiovisual equipment, 2 of them partly equipped (no computer); 23 classrooms with the capacity for 10-40 students, 4 of them equipped with audio-visual equipment. Most classrooms contain two or three electrical outlets for students with laptops. The campus (including the library, but excluding the classrooms) is equipped with a wireless internet connection. Currently the students enjoy wireless access to the internet in the computer halls, libraries, main hallways of the Social Sciences and the Humanities buildings, the Main Forum, selected instruction halls, etc. An updated list of the areas where wireless networking is available is posted on the University website. Additionally, dozens of electrical outlets were installed in the Social Sciences building and the libraries for students' use (even before the wireless communication era).

3.7.2.2 How many computer labs serve the students in the program, and how many computers are there in each lab? Specify the existing hardware and software, and state if it includes special hardware and/or software. Specify the institutional and unit computer layout, and how it serves the parent unit and the program.

There are two main computer centers for students on the Mount Scopus campus with approximately 430 computers. Each center contains 8 instruction classrooms. In addition, there are approximately 400 computers in 25 stations in open campus areas, special computer halls and public stations in the libraries. There are over 20 public printers in the computer centers and in various areas on campus for students' use. The computers are equipped with Office software, Internet, electronic email, statistics software (Jump, SPSS, SAS), access to the library catalogue and to all the information databases and academic journals, as well as access to the information technology network. The computers in the computer center classrooms are installed with Class-net hardware, which allows the instructor to "broadcast" his/her computer screen onto the students' screens to demonstrate the study material. Detailed information on the computing systems available to students in Mount Scopus can be found at: http://msfarms.huji.ac.il. The institution's computing arrangements include the Computerization, Communication and Information Authority and the Information System Department. These divisions are centrally responsible for the computing infrastructure, the computing servers (Internet servers, electronic mailing services, library catalogues, files, information systems, technological learning devices and video), the administrative information systems, the devices for backing up and securing information, public computing throughout the campus, wireless network connections, and a variety of other computing services. The University's computing bodies set up the entire infrastructure so as to improve teaching and reduce costs, providing quality service to students and instructors. These bodies relieve the academic departments of computer technology work so that they can concentrate on academic activity. Some of the departments employ their own systems to coordinate computing in order to technically support their staff's and department's activities. These coordinators are also part of the University's central computing bodies.

3.7.2.3 Do the parent unit and program have access to additional facilities for special purposes, e.g. conference rooms, study centres, research centres and meeting rooms? If teaching activities take place outside the campus, please specify which activities these are and the settings in which they are carried out.

The department has a seminar room that also serves as the department library (The "Gad Bone" Library)

3.7.3 Laboratories

3.7.3.1 What laboratories serve the program, who makes use of them, how are they equipped, and how many seats do they have?

The department has no laboratories.

3.7.4 Library

3.7.4.1 Describe the library that serves the students and the teaching staff of the program: its location, its physical structure, the number of titles according to subjects, journals, computerised databases, the number of required books relative to the number of students, opening hours, number of seats, number of computers, the library's professional staff and their qualifications, to what extent students receive assistance and guidance in the library, the ability of students and teaching staff to use databases outside the library (using a code to connect to the computer). Specify the policy guiding the purchase of material for the library: How are decisions made for the purchase of books, journals, computerised databases etc., based on what recommendations/requirements? What are the procedures for updating the library? Is there a clear and well-defined budget for the library?

Bloomfield Library for the Humanities and Social Sciences:

Introduction

The Bloomfield Library for Humanities and Social Sciences was established in 1981 with the merging of 24 departmental libraries from the Edmund Safra campus in one new building on Mt. Scopus. The library was intended to serve teachers, researchers and students of the Faculties of Humanities, Social Sciences and Business Administration. In fact, the entire Hebrew University community patronizes the library. About 14,000 borrowers are registered.

Building Facility

The library's five-story building is located in the center of the Mt. Scopus campus, between the buildings of the Faculties of Humanities and Social Sciences. The entrance floor includes the Reference, Circulation, Periodicals, Cataloging, and Acquisitions Departments and the Administrative offices. The lower level houses the Photocopy Service and storage facilities. The three floors of

reading rooms are divided according to field of study. Each reading room is approximately 3,000 square meters. There is a modern media department for the music, audio and video collection. The map collection, located in the Social Sciences building, includes sheet and wall maps, atlases, etc. All areas of the library building are accessible to the handicapped through ramps and elevators. A new worksite for people with disabilities is located in the Reference Department. In addition to other services, the library offers teachers and students ???three seminar 56 rooms??? SOMETHING IS WRONG HERE and four "smart" classrooms equipped with the latest in audio-visual and computer facilities.

The Collection
538,623 cataloged titles, including:
• 1,078 print journal subscriptions
• 20,000 electronic journal subscriptions
• 6,131 DVD and videocassettes
• 19,842 phonograph records and CDs
• 870,000 items on the shelves
• 125 electronic databases

Required Reading for Courses
The Reserved Reading Collection is updated every semester. It includes textbooks and a database of scanned articles and digitized music based on the lists of required reading submitted by teachers. If a title is on a required reading list, the library must provide one copy for every 30 students (the ratio can be changed if necessary). This year 5,212 books and 5,628 scanned articles are on reserve. Access to the on-line database of scanned materials is open to students only after they log in with their personal identification code.

Circulation Services
The majority of monographs can be borrowed, and each patron may borrow up to 50 books simultaneously. There are approximately 3,400 circulation transactions on an average day during the school year. The patrons themselves enter requests into the system. Daily renewals are performed automatically by the Aleph500 system after a check that there are no requests for an item or problems with a reader. Materials that are not available in the collection may be obtained by inter-library loan or document delivery service for a fee. This service handles about 4,300 requests for articles and books annually.

Library Hours
During the school year:
Sun.-Wed. 9:00-22:00
Thurs. 9:00-19:00
Summer hours:
Sun.-Thurs. 9:00-19:00

Seating Capacity
There are about 1,700 seats in the various reading rooms, some in quiet areas and some in areas designated for group study. There are also individual carrels throughout the building for students who seek a quiet, private corner. In addition there are classrooms for collaborative learning. The Periodicals Reading Room, where current periodicals are displayed, offers comfortable informal seating.

Computer Stations
About 150 stations are available for patrons in all areas of the building. Patrons can search the library's catalogs, databases and electronic journals from all stations.. Access to the Internet, email, Microsoft Office and many programs provided by the University Computer Authority are also available on the library stations. The library has set up areas for wireless connection for students bringing their own laptop computers.

Library Staff
The library staff comprises 36 librarians (28.5 tenured positions), one computer specialist, one technical assistant, and one administrative assistant. The library also employs student assistants, for approximately 54,000 hours annually. All librarians have academic degrees in library science and in the fields of humanities and social sciences, while several have advanced degrees. The librarians are fluent in many languages, which is necessary for serving the researchers. There is a subject specialist for each area of study covered by the library. During all opening hours there is always a librarian to give reference services. The librarians are active in both inter- and intra- university forums, publish in professional journals, lecture at conferences, and have served as chairpersons of national committees.

Library Instruction and Reference Services
Library orientation sessions are offered to new students at the beginning of each semester by the reference staff. These include tours of the library facilities and explanations of the use of the OPAC. There are specialized instruction classes coordinated by subject specialist librarians and teachers keyed to particular course subjects. In-depth training is given to acquaint students with the databases and reference tools in their field of study. In each of the reading rooms there is a subject specialist librarian on duty to answer individual questions and help guide the students.

Library Homepage
The library homepage (www.mslib.huji.ac.il) is arranged to help students and researchers find material in their subject area. There are general pages on "How to find…" and pages devoted to a particular subject (e.g. linguistics, music). Each page has explanations about the materials and links to on-line resources. A detailed database page offers descriptions of each of our 125 databases. All pages are in both English and Hebrew. Any patron in need of help can reach a librarian directly from the homepage and will receive a reply by email.

Access to Electronic Resources
Students, teachers and researchers can access most of the electronic journals and databases from any computer that is connected to the university network on campus. They can access electronic resources from their home or dorm by entering a personal identification code. This means that the electronic collection is accessible 24 hours a day, 7 days a week, to the entire Hebrew University community.

Collection Development
At the beginning of each academic year the Library Authority allocates an acquisitions budget to each faculty. Each Faculty Library Committee, whose members are appointed by the Dean, decides on the division of the budget among the many departments and fields of study in the faculty. Part of the budget is allotted to subscriptions to journals and databases. The remaining budget is for monographs and non-book materials. During the last few years there has been an increasing effort to cooperate with other libraries in the Hebrew University and, through Malmad, to purchase subscriptions jointly. Subscriptions to new databases are approved only after a trial period and evaluation by librarians, researchers and teachers. The collection development is a joint effort of librarians and faculty members. Heads of departments annually appoint a member of the department as a liaison with the library in dealing with the requests of his/her colleagues. Selections are made from required reading lists, teachers' recommendations, publishers' catalogs, professional publications and on-line

resources. The library fortunately receives donations that help build up the more expensive collections.

3.7.4.2 Does the institution and the program take steps to provide convenient access for students with special needs to the study material and the various facilities , e.g. classrooms, laboratories, library? If some part of the program takes place on a different campus, how is equal opportunity of access to the facilities and equipment at the main campus ensured for all students?

As a result of a continuous increase in awareness during the last few years, the university administration has seriously addressed the issue of students with special needs. During the current academic year, the Office of the Dean of Students established an Accessibility Unit, which aims to provide handicapped students equal opportunities in using all the university services and taking part in all the activities and programs the university offers. More details on facilities for students with special needs or with learning disabilities can be obtained at the Office of the Dean of Students.

3.7.4.3 In summary, what are the strengths and weaknesses of the physical infrastructure?

Weaknesses:

The infrastructure of the Faculty of Social Sciences requires additional upgrading:
Many lecture halls are still without audio-visual capabilities.

- Many classrooms which are still not air-conditioned, making it difficult to teach effectively in the second part of the spring semester and in the summer courses.
- The library has undergone immense budget cuts. For years, budgetary constraints have prevented updating reference books and textbooks. Our library currently lags significantly behind social science libraries in institutions of comparable size around the world.

Strengths:

In spite of the above difficulties, the Department of Statistics offers state of the art research opportunities for its faculty members and graduate students in all the major fields of Statistics.

4 Research

4.1 Overview of research in the Department of Statistics

From the outset, the Department of Statistics at the Hebrew University has emphasized excellence in research. We do not have solid data about the standing of our department as compared to the Statistics departments in the other universities in Israel. Nevertheless, the data specified below and in the appendix section testify to our research quality and diversity. Leading scientists from all over the world find our department as an inspiring place to visit.

The hiring policy of the Department of Statistics is similar to that of top departments in the USA and Europe. Aside from establishing research programs in the traditional major areas of Statistics, our hiring has taken into account the significant scientific changes that we have seen in recent years. For example, recognizing that the discipline of Computer Sciences has now areas that are common to Statistics.

4.2 Research interests

Below we list the topics of research of our faculty members:

Haviv, Moshe	
1.	Operations research
2.	Queuing models
3.	Decision making and strategic behavior in queues
4.	Markov decision processes
5.	Large Markov chains

Chigansky, Pavel	
1.	Statistical inference for continuous time processes
2.	Long time asymptotic properties of optimal estimation algorithms
3.	Distribution of functionals of processes, involving non-Markov times

Elidan, Gal	
1.	Model selection in probabilistic graphical models
2.	Probabilistic graphical models for medical diagnosis
3.	Model-based descriptive image analysis
4.	Large scale learning of probabilistic graphical models
5.	Approximate inference in graphical model

Gilula, Zvi	
1.	Categorical Data Analysis -General Theory (latent class models, canonical forms, Chi-square decompositions)
2.	Categorical Data Analysis- Association and predictive models for ordinal categorical data
3.	Categorical Data Analysis- Conditional log-linear models, high-dimensional data analysis
4.	Marketing- models for attitudinal scales
5.	Marketing -Data Fusion

Kella, Ofer	
1.	Applied Probability
2.	Stochastic Processes
3.	Operations Research
4.	Queying Theory
Mandel, Micha	
1.	Selection bias and cross-sectional sampling
2.	Estimating time-to-event from longitudinal categorical data
3.	Dose finding

Motro, Uzi	
1.	Game-theory models for understanding the evolution of social behavior
2.	Theoretical population biology
3.	Statistical aspects of forensic DNA identification

Nirel, Nurit	
1.	Environmental spatio-temporal structures
2.	Air quality and epidemiology
3.	Modern census methodology

Oman, Samuel D.	
1.	Applied Statistics
2.	Spatial Statistics
3.	Analysis of Categorical Variables

Pfeffermann, Danny	
1.	Analytic Inference from Complex Surveys
2.	Seasonal Adjustment and Trend Estimation
3.	Small Area Estimation
4.	Observational Studies and nonresponse

Pollak, Moshe	
1.	Sequential Quality Control
2.	Sequential Selection

Rinott, Yosef	
1.	Probability inequalities
2.	Some probabilistic aspects of game theory
3.	Decision theory and finite population and Monte Carlo Sampling
4.	Statistical disclosure control
5.	Mathematical statsitics
Ritov, Ya'acov	
1.	HMM
2.	Sparse regression
3.	Different topics

Yakir, Benjamin	
1.	Statistical genetics
2.	Change-point detection
3.	Large deviations in random fields

Zucker, David	
1.	Nonlinear Statistical Models with Covariate Measurement Error
2.	Survival Analysis
3.	Analysis of Repeated Measurement Data (Continuous and Binary)

4.3 Research Collaborations

Members of the Department of Statistics collaborate internationally with top scientists in the USA and Europe, and among themselves. This is made possible in part through joint grants, and such collaboration is well expressed in joint publications (see the appendix on individual publications)

4.4 Publication records

The department's excellence in research is clearly reflected by the publication records of the faculty members. All in all, over the last five years the 15 members of the department have published about 152 peer-reviewed articles, over 17 book chapters. About half of the faculty published over 2 papers a year on the average during the last 5 years. The vast majority of the publications are in the top journals in Statistics and Operation Research.

4.5 Editorial activity

As specified in the appendix, many of our members have been serving as editors, associate editors, and members of editorial boards in leading journals in their respective fields. The list is detailed below.

Haviv, Moshe	
1.	Journal of Applied Probability, referee.
2.	Mathematics of Operations Research, referee.
3.	Operations Research, referee.
4.	Management Science, referee.
5.	Computers and Operations Research, referee.
6.	Linear Algebra and its Applications, referee.
7.	SIAM Journal on Matrix Analysis and Applications, referee.
8.	American Journal of Mathematical and Management Sciences, referee.
9.	European Journal of Operational Research, referee.
10.	Queuing Systems: Theory and Applications, referee.
11.	Manufacturing and Operations Management, referee.

Gilula, Zvi	
1.	Journal of the American Statistical Association, Associate Editor (20 years)
2.	Journal of the International Marketing Research Society (6 years)

Kella, Ofer	
1.	Operations Research Letters – associate editor (since 1999)
2.	Mathematics of Operations Research – associate editor (since 2004)
3.	Queueing Systems: Theory and Applications – associate editor (since 1994)
4.	Operations Research–associate editor (1995-2005)

Motro, Uzi	
1.	Member of the editorial board of the Israel Journal of Ecology and Evolution

Pfeffermann, Danny	
1.	Associate Editor, *Journal of Statistical Planning and Inference,* 1998 -2000
2.	Associate Editor, *Biometrika*, 2001 – 2007
3.	Associate Editor, *Survey Methodology*, 1991 - present

Pollak, Moshe	
1.	The Annals of Statistics, Associate Editor (3 years)
2.	The Journal of the American Statistical Association (3 years)

Rinott, Yosef	
1.	IMS Lecture notes-Monograph series, Assoc Editor
2.	Metron, Italian Journal of Statistics, Assoc Editor
3.	Journal of Privacy and Confidentiality (electronic), Assoc Editor

Ritov, Ya'acov	
1.	The Annals of Statistics Associate Editor (past)
2.	Bernoulli Associate Editor (past)

Zucker, David	
1.	Biometrics, Co-Editor, 2008-2010
2.	Biometrics, Associate Editor, 2003-2007

4.6 Research grants

Members of the Department receive excellent grant support from competitive national and international external funding agencies. These include the ISF (Israel Science Foundation), the BSF (Binational Science Foundation), the GIF (German Israeli Foundation), NIH, Niedersachzen. Our body of 15 active faculty members won 30 competitive grants in the last 5 years. More details in the appendix.

4.7 Graduate students

As is typical in leading departments, our research is conducted in collaboration with students. Over the last five years, our body of 15 faculty members advised 42 Masters students and 26 Ph.D. Individual details are reported in the appendix

4.8 Summary and Conclusions: Research outlook and plans

Our faculty are producing top-level research and we have reasons to believe that such level will be maintained despite the current budgetary constraints. The expected heavy wave of retirment in 2016, if not met with corrective measures, may inflict a severe threat on the future of the department.

Name	Expected Date of Retirment
D. Pffeferman	Oct 2009
U. Motro	Oct 2012
Y. Rinott	Oct 2013
Z. Gilula	Oct 2013
S. Oman	Oct 2014
M. Pollack	Oct 2016

We hope to find an open ear and a supportive shoulder at the academic management of the university to help maintain the department of statistics that has so successfully met (or surpassed) the criteria of excellence set up by the university.

5 Self-Evaluation, Summary and Conclusions

5.1 To what extent do the institution and the parent unit perform self-evaluation on a regular basis (apart from the evaluation initiated by the Council for Higher Education)? If self-evaluation is performed, please describe and assess the way it is carried out and its frequency.

The Hebrew University initiated a systematic process of review and evaluation of all its units at regular intervals (usually each unit is being evaluated every 5-7 years). Depending on the nature of the unit being evaluated, the review process relies either on external committees consisting of internationally renowned experts in the reviewed field from leading universities abroad, or on internal committees (based on HUJI personnel) supplemented by one or two external member from other university either in Israel or abroad. The mandate of the Committees, as stated in the nomination letter, is to evaluate the unit's academic performance in teaching and research, and its standing within the field, in Israel and internationally. The Committees are asked to identify areas of strength and weakness and to advise the University on ways to improve and develop the unit. To achieve that goal committees examine all aspects of the reviewed unit: the activity of faculty members, in research and teaching, curricula, students' level, infrastructure, and administrative functions.

5.2 Has the institution appointed a senior staff member to deal with self-evaluation? If so, please state his/her name and past and present position in the institution. State and assess the definition of his task as the staff member in charge of quality evaluation in the institution, including the scope of his authority and his method of operation.

The Hebrew University has two vice-rectors. One of them, Professor Yaacov Schul, is responsible for the academic evaluations at the Hebrew University. The other vice-rector, Professor Oded Navon, assists Professor Schul in coordinating and implementing the whole process of the review, which begins with the appointment of the Committee members, and the preparation of material by the reviewed unit. Preparing the material for the Review Committee also gives the unit an opportunity for self-assessment, itself an important stage in the review. The Committee then convenes in Jerusalem in which the Committee members get access to all relevant material and meet with staff, faculty and students. The Committee's report is submitted to the Rector, and its recommendations are carefully studied by the University administration (The President, the Rector, and the Vice-Rectors). The reviewed unit is asked to prepare a response, which is brought, together with the report of the review committee before the University's Committee for Academic Policy. This Committee, chaired by the President and the Rector, discusses all the relevant matters and decides on implementing all, or parts, of the recommendations.

5.3 What conclusions did the parent unit and the program derive from the self-evaluation with regard to both the way it was performed and its results? Did it shed light on issues that were in need of treatment/improvement and did it eventually contribute to the improvement of the program?

The Department of Statistics was asked to perform the evaluation and write the report. To collect data for the various questions about the academic staff, we conducted a survey among all teachers of the department, including a structured CV and questions about research and teaching activity, other academic activities, research interests, and a request to fill out a structured table for each course they teach and translate their course syllabi and reading lists into English. With the invaluable assistance of the Department administrative staff, especially the Administrative Manager, Ms. Rachel Bankir and the help of the Faculty and the University, we collected the administrative information required for this report. The involvement of our academic and administrative staff in preparing the report is of much value as it increases the sense of unity and common fate.

Preparing the report served as an incentive for the department to gather a great deal of information (about courses, teaching programs, students supervision, grants, lists of faculty members' publications, etc.), which will undoubtedly be useful in the future. The self-evaluation provided the Department of Statistics with the opportunity to critically examine its study programs and its research activities. Although these issues are carefully considered on a regular basis by the department's chair and various committees, the evaluation processes motivated us to re-discuss some of the issues it raised. Moreover, the evaluation will provide us with feedback from outside observers concerning our relative standing vis-à-vis other departments in Israel and abroad.

5.4 If a mechanism has been decided upon for the future treatment of problematic issues that were highlighted by the self-evaluation, specify it, and mention the functionary within the institution who would be responsible for the follow-up. Please refer to the question of how the institution and the parent unit intend to deal with quality assessment and implementation in the future.

Following the discussion and decision by the University's Committee for Academic Policy, the executive summary of the review report is posted on the internet. The Vice-Rector discusses the recommendations and their implementation with the reviewed unit's chairperson. The implementation is monitored by the Implementation Committee, which include the two vice-rectors, three former deans (Social Science, Natural Science, and Agriculture), and two members of the University's Standing Committee.

5.5 Are the results of the self-evaluation open, transparent and accessible to the staff (academic as well as administrative) and the students?

The Hebrew University regards transparency and accessibility of evaluation reports as essential to the usefulness of the self-evaluation process. Following the discussion by the committee for academic policy (see above), the reports are made public and posted on the University's website.

Chapter 6

Appendices

(* Appendices will appear in the body of the report)

6.1 The Study Program - Table no. 1

Academic Year of Evaluation* - (2009/10)

Statistics Department - BA Study Program

***The data must refer only to the academic year during which the quality assessment is taking place**

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 Obligatory	1	Basics: Probability, Data and Computers (52220)	Obligatory	6	None	3	3	-	354	Prof. Zvi Gilula	Professor
										Prof. Moshe Pollak	Professor
										Dr. Gal Elidan	Sen. Lecturer
										Dr. Micha Mandel	Lecturer
										Vitally Portnoy	M.A. Student
										Irene Kornilenko	M.A. Student
										Noam Meir	M.A. Student
										Dmitry Rotshild	M.A. Student
	1 or 2	Principles and Applications in Statistical Analysis (52221)	Obligatory	5	57121, 52220	3	2	-	287	Prof. Moshe Pollak	Professor
										Dr. Micha Mandel	Lecturer
										Daniel Nevo	M.A. Student
										Oshrit Munk	M.A. Student
	1	Math for Economists and Statisticians A1 (57121)	Obligatory	7	None	3	4	-	359	Dr. Jonathan Stupp	Lecturer
										Dr. Yevgenia Zochovitzki	Lecturer
										Mr. Albert Duek	Lecturer

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
	2	Math for Economists and Statisticians A2 (57122)	Obligatory	7	57121	3	4	-	363	Dr. Jonathan Stupp	Lecturer
										Dr. Yevgenia Zochovitzki	Lecturer
										Mr. Albert Duek	Lecturer
	1	Intro. To Probability and Statistics I (52114)	Obligatory For Nat. Sc. Students	4	None	3	1	-	140	Prof. Uzi Motro	Professor
										Prof. Moshe Haviv	Professor
										Mr. Liron Ravner	M.A. Student
										Ms. Anna Sikov	Ph.D Student
	2	Intro. To Probability and Statistics II (52115)	Obligatory For Nat. Sc. Students	4	52114	3	1	-	137	Prof. Uzi Motro	Professor
										Prof. Moshe Haviv	Professor
										Mr. Liron Ravner	M.A. Student
										Ms. Anna Sikov	Ph.D Student
2 Obligatory	2	Programming for Statistical Applications (52304)	Obligatory	3	52303,52319	3	-	-	27	Ms. Bella Vekolenko-Legun	Ph.D Student
	1	Statistical Inference and Applications A (52303)	Obligatory	5	57122,52221	3	2	-	30	Dr. Pavel Chigansky	Sen. Lecturer
										Mr. Saar Gershuni	M.A. Student
	2	Statistical Inference and Applications B (52305)	Obligatory	3	52303,52319	2	1	-	32	Prof. Moshe Pollak	Professor
										Mr. Saar Gershuni	M.A. Student
	1	Vector Spaces and Matrices (52319)	Obligatory	4	57121	3	1	-	27	Dr. Yevgenia Zochovitzki	Lecturer
	2	Regression and Linear Models (52320)	Obligatory	4	52319,52303	3	1	-	25	Prof. Samuel D. Oman	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
	1	Statistical Theory (52314)	Obligatory For Nat. Sc. Students	6	52115,80420	4	2	-	9	Dr. Pavel Chigansky	Sen. Lecturer
	2	Regression, Statistical Applications and Computations (52315)	Obligatory For Nat. Sc. Students	6	52314	4	2	-	4	Prof. David Zucker	Professor
2 Elective (Must choose 2 of 3)	2	Principles of Research Design and Sampling Methods (52710)	Elective	3	52303	2	1	-	16	Prof. David Zucker	Professor
	2	Introduction to Operations Research - Deterministic Models (52530)	Elective	3	52303,52319	2	1	-	20	Prof. Ofer Kella	Professor
	2	Introduction to Operations Research - Stochastic Models (52531)	Elective	3	52303,52319	2	1	-	15	Dr. Gal Elidan	Sen. Lecturer
3 Obligatory	1	Statistical Models and their Analysis (52518)	Obligatory	4	52304,52305,52320	3	1	-	31	Prof. David Zucker Mr. Saar Gershuni	Professor M.A. Student
	2	Statistic Lab (52568)	Obligatory	2	52518	-	-	2	24	Prof. Samuel D. Oman	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
3 Obligatory (Course and Seminar Must choose 1 of 2)	1 & 2	Frequency Data Analysis (52602)	Obligatory	5	52305,52320,52304/52315	5	-	-	18	Prof. Zvi Gilula	Professor
	1 & 2	Gene Mapping (52607)	Obligatory	5	52305,52320,52304/52315	5	-	-	17	Prof. Benjamin Yakir	Professor
3 Elective Courses for Third Year students and M.A. Students	1	Gene Mapping (52608)	Elective	3	52305,52320,52304/52315	3	-	-	17	Prof. Benjamin Yakir	Professor
	2	Sampling and Variance in Finite Populations (52715)	Elective	3	52305,52320,52304/52315	3	-	-	8	Dr. Arie Ryter	Guest Lecturer
	1	Computational Statistics (52609)	Elective	2	52305,52320,52304/52315	2	-	-	3	Prof. Benjamin Yakir	Professor
	1	Probabilistic Methods in Artificial Intelligence (67800)	Elective	4	52305,52320,52304/52315	2	2	-	31	Dr. Amir Globerson	Lecturer
										Dr. Gal Elidan	Sen. Lecturer
	2	Probabilistic Graphical Models: Advanced Topics (67825)	Elective	3	52305,52320,52304/52315	2	1	-	7	Dr. Amir Globerson	Lecturer
										Dr. Gal Elidan	Sen. Lecturer
	1	Topics In Probability (52611)	Elective	2	52305,52320,52304/52315	2	-	-	6	Prof. Ofer Kella	Professor
	1	Markov Chains Monte Carlo (52564)	Elective	2	52305,52320,52304/52315	2	-	-	6	Prof. Samuel D. Oman	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
	1	Frequency Data Analysis (52603)	Elective	3	52305,52320,52304/52315	3	-	-	18	Prof. Zvi Gilula	Professor
	1	Time Series Analysis (52640)	Elective	3	52305,52320,52304/52315	3	-	-	26	Prof. Benjamin Yakir	Professor
										Prof. Danny Pfeffermann	Professor
	2	Principles of Research Design and Sampling Methods (52710)	Elective	3	52305,52320,52304/52315	3	-	-	16	Prof. David Zucker	Professor
3 Elective Courses for Students on a Single Track	1	Introduction to Demography for M.A. (53750)	Elective	2	None	2	-	-		Prof. Yona Skelkans	Lecturer
	1	Fertility and Marriage (53514)	Elective	2	53750	2	-	-		Prof. Yona Skelkans	Lecturer
	2	Selected Issues in Demography (53751)	Elective	2	53750	2	-	-		Prof. Yona Skelkans	Lecturer
	1	Reproductive Behavior (53972)	Elective	2	None	2	-	-		Prof. Barbara Oken	Lecturer
Total				125		92	31	2			

Statistics Department - MA Study Program

Obligatory Courses for all MA Students in the Various Areas

***The data must refer only to the academic year during which the quality assessment is taking place**

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Advanced Statistical Models A (52801)	Obligatory	6	None	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	2	Advanced Statistical Models B (52805)	Obligatory	6	52817	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	2	Computational Methods in Non Linear Optimization (52879)	Obligatory	2	None	2	-	-	12	Prof. Benjamin Yakir	Professor
1 or 2	2	Applied Probability 1 (52812)	Obligatory for OR Program	4	52817	3	1	-	4	Dr. Pavel Chigansky	Sen. Lecturer
1 or 2	1	Applied Probability 2 (52816)	Obligatory for OR Program	4	None	2	2	-	4	Prof. Ofer Kella	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	Not taught this year	Linear Programming (52814)	Obligatory for OR Program	4	None	4	-	-	?	Prof. Ofer Kella	Professor
1 or 2	2	Non Linear Programming (52815)	Obligatory for OR Program	2	None	2	-	-	7	Prof. Ofer Kella	Professor
1 or 2	1	Measure Theory (80517)	Obligatory For Nat. Sc. Students	4	Recommended course 80516	3	1	-		Prof. Andre Shenkovski	Lecturer
1 or 2	1 & 2	Markov Chains Monte Carlo (52847)	Seminar	3	None	3	-	-	10	Prof. Samuel D. Oman	Professor
1 or 2	1	Article Reading in Biostatistics (52846)	Seminar	3	None	3	-	-	8	Prof Yosef Rinott	Professor
1 or 2	1 & 2	Computational Statistics (52804)	Seminar	3	None	3	-	-	4	Prof. Benjamin Yakir	Professor
1 & 2	1 & 2	Departmental Seminar for M.A. Students (52870)	Seminar	1	None	1	-	-	25	Dr. Micha Mandel	Lecturer
2	1 & 2	Laboratory in Statistical Consulting (52841)	Laboratory	2	None	-	-	2	11	Dr. Micha Mandel	Lecturer
										Dr. Ronit Nirel	Lecturer
Total				50		38	10	2			

Service Courses to Other Departments[1]

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
	1	Introduction to Statistics I For Business Administration And Accountant Students (52116)[2]		3	None	2	1	-	175	Mr. Asaf Sarig	Ph.D Student
										Ms. Rinat Nahum	MA Student
	2	Introduction to Statistics II For Business Administration And Accountant Students (52117)[2]		3	52116	2	1	-	183	Mr. Asaf Sarig	Ph.D Student
										Ms. Sarit Agami	PhD student
	1	Regression and Analysis Of Variance (52302)[3]		3	52114	2	1	-	11	Prof. Samuel D. Oman	Professor
	2	Non Parametric Statistics (52308)[3]		3	52114	2	1	-	8	Dr. Micha Mandel	Lecturer
1	1	Introduction to Statistics For Chemistry Students (52104)		3	None	3	-	-	116	Ms. Sarit Agami	PhD student
	1	Introduction to Statistics For Nursing Students (52009)		4	None	2	2	-	113	Mr. Shmuel Leavitt	PhD Student
										Ms. Geffen Kleinstern	MA Student
	2	Introduction to Statistics For Pharmacologists (52024)		2	None	2	-	-	120	Dr. Ronit Nirel	Lecturer
	1	Introduction to Statistics For Communications Students (52800)		4	None	3	1	-	85	Mr. Asaf Sarig	Ph.D Student
										Mr. Liron Ravner	MA Student

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
	1 or 2	Introduction to Statistics For International Studies And Political Science Students (52799)		2	None	2	1	-	167	Mr. Asaf Sarig	Ph.D Student
										Ms. Sarit Agami	Ph.D Student
										Mr. Raphael Nechemia	MA Student
										Ms. Naomi Kaplan	MA Student
Total				27		20	8	0			

1 Courses are for Non-Statasticians
2 Course Taught at Mount Scopus
3 Course Taught at Givat Ram

Study Programs For Various MA Areas

Statistical Methods Program

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Advanced Statistical Models A (52801)	Obligatory	6	None	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	2	Advanced Statistical Models B (52805)	Obligatory	6	52817	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	2	Computational Methods in Non Linear Optimization (52879)	Obligatory	2	None	2	-	-	12	Prof. Benjamin Yakir	Professor
1 or 2		52847 or 52846 or 52804	Seminar	3	None	3	-	-		Written in Table Above	
2	1 & 2	Laboratory in Statistical Consulting (52841)	Laboratory	2	None	-	-	2	11	Dr. Micha Mandel	Lecturer
										Dr. Ronit Nirel	Lecturer
1 & 2	1 & 2	Departmental Seminar for M.A. Students (52870)	Seminar	1	None	1	-	-	25	Dr. Micha Mandel	Lecturer
1 or 2	Research Track Students must choose 15 elective credits from the General List Non- Research Track Students must choose 23 elective credits from the General List										

Operations Research Program

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1 or 2	52801 or 52805	Obligatory	6	52817 for Course 52805	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	2	Computational Methods in Non Linear Optimization (52879)	Obligatory	2	None	2	-	-	12	Prof. Benjamin Yakir	Professor
1 or 2	2	Applied Probability 1 (52812)	Obligatory for OR Program	4	52817	3	1	-	4	Dr. Pavel Chigansky	Sen. Lecturer
1 or 2	1	Applied Probability 2 (52816)	Obligatory for OR Program	4	None	2	2	-	4	Prof. Ofer Kella	Professor
1 or 2	Not Taught This Year	Linear Programming (52814)	Obligatory for OR Program	4	None	4	-	-		Prof. Ofer Kella	Professor
1 or 2	2	Non Linear Programming (52815)	Obligatory for OR Program	2	None	2	-	-	7	Prof. Ofer Kella	Professor
1 or 2		52847 or 52846	Seminar	3	None	3	-	-		Written in Table Above	

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1 & 2	Computational Statistics (52804)	Seminar	3	None	3	-	-	4	Prof. Benjamin Yakir	Professor
1 & 2	1 & 2	Departmental Seminar for M.A. Students (52870)	Seminar	1	None	1	-	-	25	Dr. Micha Mandel	Lecturer
1 or 2	Research Track Students must choose 8 elective credits from the General List Non- Research Track Students must choose 14 elective credits from the General List										

Biostatistics Program

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Advanced Statistical Models A (52801)	Obligatory	6	None	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander	M.A. Student
1 or 2	2	Advanced Statistical Models B (52805)	Obligatory	6	52817	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	2	Computational Methods in Non Linear Optimization (52879)	Obligatory	2	None	2	-	-	12	Prof. Benjamin Yakir	Professor
1 or 2		52847 or 52846 or 52804	Seminar	3	None	3	-	-		Written in Table Above	
1 & 2	1 & 2	Departmental Seminar for M.A. Students (52870)	Seminar	1	None	1	-	-	25	Dr. Micha Mandel	Lecturer
1 or 2	2	Principles of Research Design and Sampling Methods (52710)	Obligatory	3	52305,52320,52304/52315	3	-	-	16	Prof. David Zucker	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	Not Taught This Year	Survival Analysis	Obligatory	3	None	3	-	-		Prof. David Zucker	Professor
1 or 2	Not Taught This Year	Binary Data Analysis	Obligatory	3	None	3	-	-		Prof. David Zucker	Professor
1 or 2	1	Principles and Uses of Epidemiology (95239)	Obligatory	3	None	3	-	-		Dr. Yehuda Neumark	Lecturer
1 or 2	1	Interpretation of Epidemiological and Statistical Data (98405)	Obligatory	3	None	2	1	-		Dr. Nurit Zinraich	Lecturer
										Ms. Bella Sevichki	MA Student
1 or 2	2	Clinical Trials (98481)	Obligatory	2	None	2	-	-		Prof. Ora Paltiel	Lecturer
										Prof. Yechiel Fridlender	Lecturer
										Prof. Olry	Lecturer

Year in Program	Semester	Course Title	Course Type (oblig./elective/ seminar/other)	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
2	Taught in the 1st Semester at the School of Public Health. The Student must choose from one of the courses found in the Graduate Student Handbook	Course in a Specific Epidemiological Discipline	Project	2	None	2	-	-			
2	Year long Course Based on the Subject chosen in previous course	Laboratory in Statistical Consulting	Laboratory	2	None	-	-	2			
1 or 2	Non- Research Track Students must choose 6 elective credits from the General List										

Official Statistics Program

Year in Program	Semester	Course Title	Course Type (oblig./elective/	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Advanced Statistical Models A (52801)	Obligatory	6	None	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	2	Advanced Statistical Models B (52805)	Obligatory	6	52817	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	2	Computational Methods in Non Linear Optimization (52879)	Obligatory	2	None	2	-	-	12	Prof. Benjamin Yakir	Professor
1 or 2		52847 or 52846 or 52804	Seminar	3	None	3	-	-		Written in Table Above	
2	Year long Course Based on the Subject chosen in previous	Laboratory in Statistical Consulting	Laboratory	2	None	-	-	2			
1 & 2	1 & 2	Departmental Seminar for M.A. Students (52870)	Seminar	1	None	1	-	-	25	Dr. Micha Mandel	Lecturer
1 or 2	Not Taught This Year	Random Phenomena in Various Fields (52803)	Obligatory	3	None	3	-	-		Prof. Danny Pfeffermann	Professor

Year in Program	Semester	Course Title	Course Type (oblig./elective/	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Time Series Analysis (52640)	Obligatory	3	52305,52320,52304/52315	3	-	-	26	Prof. Benjamin Yakir	Professor
										Prof. Danny Pfeffermann	Professor
	Not Taught This Year	Estimation in Small Areas	Elective	3							
	Not Taught This Year	Statistical Methods in Modern	Elective	3							
	Not Taught This Year	Indices	Elective	3							
1 or 2	Research Track Students must choose 6 elective credits from the General List Non- Research Track Students must choose 14 elective credits from the General List										

Statistics in Mathematics and Probability (Natural Sciences)

Year in Program	Semester	Course Title	Course Type (oblig./elective/	No. of Credits	Prerequisites for Admission	Weekly Teaching Hours	Weekly Exercise Hours	Weekly Laboratory Hours	No. of Students	Teaching Staff	
										Name of staff member	Employment Degree
1 or 2	1	Advanced Statistical Models A (52801)	Obligatory	6	None	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	2	Advanced Statistical Models B (52805)	Obligatory	6	52817	4	2	-	16	Prof. Yaacov Ritov	Professor
										Mr. Aleksander Vainer	M.A. Student
1 or 2	1	Probability and Random Processes (52817)	Obligatory	6	None	4	2	-	14	Prof Yosef Rinott	Professor
										Mr. Jonathan Yefenof	M.A. Student
1 or 2	Not Taught This Year	Numerical Analysis I (80426)	Obligatory	3							
1 or 2	Not Taught This Year	Asymptotical Statistics (52629)	Obligatory	3							
1 or 2		52847 or 52846 or 52804	Seminar	3	None	3	-	-		Written in Table Above	
2	1 & 2	Laboratory in Statistical Consulting (52841)	Laboratory	2	None	-	-	2	11	Dr. Micha Mandel	Lecturer
										Dr. Ronit Nirel	Lecturer
1 or 2	Non- Research Track Students must choose 6 elective credits from the General List										

6.2 Teaching Staff - Tables
Academic Year of Evaluation* - (2009)

***The data must refer only to the academic year during which the quality assessment is taking place**

Table 2A

Senior Academic Staff Employed

Name of Staff Member			Employment Status	Part of Full time Position in Institution		Part of Full Time Position Statistics Department		Additional Employment (outside the institution)			Area of Specialization **(See Section 4.2 of Main Report)**	Courses under responsibility of the staff member			Additional Tasks in Institution	No. of Students Receiving Guidance (*)	
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Credits for Staff member		2nd Degree	3rd Degree
First	Family	Title (Dr, Ms, Mr)		Weekly Hours	Per Cent	Weekly Hours	Per Cent		Weekly Hours	Per Cent							
Moshe	Haviv	Prof	Head of Department	Same		F		None				1. Intro. To Probability and Statistics I	4	8	-	2	1
												2. Intro. To Probability and Statistics II	4				
Pavel	Chigansky	Dr	Senior Lecturer	Same		F		None				1. Statistical Inference and Applications A	5	14	Library Commitee	-	-
												2. Statistical Theory	6				
												3. Applied Probability 1	3				

F: Full time position (6 weekly hours per semester, 12 total hours, 100%)
Department Faculty members in the Faculty of Social Science teach 12 annual credits, i.e., six teaching hours a week per semester.

Name of Staff Member			Employment Status	Part of Full time Position in Institution		Part of Full Time Position Statistics Department		Additional Employment (outside the institution)			Area of Specialization **(See Section 4.2 of Main Report)**	Courses under responsibility of the staff member			Additional Tasks in Institution	No. of Students Receiving Guidance (*)	
								Name of Employer	Part of Full Time Position								
First	Family	Title (Dr, Ms, Mr)		Weekly Hours	Per Cent	Weekly Hours[1]	Per Cent		Weekly Hours	Per Cent		Name of Course	Weekly Hours	Total Weekly Hours for Staff member		2nd Degree	3rd Degree
Gal	Elidan	Dr	Senior Lecturer	Same		F		None				1. Basics: Probability, Data and Computers	6	16	Research and Infrastructure Committee	-	-
												2. Introduction to Operations Research Stochastic Models	3				
												3. Probabilistic Methods in Artificial Intelligence	4				
												4. Probabilistic Graphical Models: Advanced Topics	3				
Zvi	Gilula	Prof	Professor	Same		F		None				1. Basics: Probability, Data and Computers	5	10	-	2	1
												2. Frequency Data Analysis	5				
Ofer	Kella	Prof	Professor	Same		F		None				1. Introduction to Operations Research - Deterministic Models	3	13	-	-	1
												2. Topics In Probability	2				
												3. Applied Probability 2	4				
												4. Non Linear Programming	2				
Micha	Mandel	Dr	Lecturer	Same		F		None				1. Basics: Probability, Data and Computers	6	17	-	2	1
												2. Principles and Applications in Statistical Analysis	5				

Name of Staff Member			Employment Status	Part of Full time Position in Institution		Part of Full Time Position Statistics Department		Additional Employment (outside the institution)			Area of Specialization **(See Section 4.2 of Main Report)**	Courses under responsibility of the staff member			Additional Tasks in Institution	No. of Students Receiving Guidance (*)	
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Weekly Hours for Staff member		2nd Degree	3rd Degree
First	Family	Title (Dr, Ms, Mr)		Weekly Hours	Per Cent	Weekly Hours[1]	Per Cent		Weekly Hours	Per Cent							
												3. Departmental Seminar for M.A. Students	1				
												4. Laboratory in Statistical Consulting	2				
												5. Non Parametric Statistics	3				
Uzi	Motro	Prof	Professor	Same		F		None				1. Intro. To Probability and Statistics I	4	8	-	2	3
												2. Intro. To Probability and Statistics II	4				
Ronit	Nirel	Dr	Senior Lecturer of Practice	Same		F		None				1. Laboratory in Statistical Consulting	2	4	-	2	-
												2. Introduction to Statistics For Pharmacologists	2				
Samuel	Oman	Prof	Professor	Same		F		None				1. Regression and Linear Models	4	12	-	2	-
												2. Statistic Lab	2				
												3. Markov Chains Monte Carlo	3				
												4. Regression and Analysis Of Variance	3				
Danny	Pfefferm ann	Prof	Professor	Same		F		None				1. Time Series Analysis	3	3	-	-	1
Moshe	Pollak	Prof	Professor	Same		F		None				1. Basics: Probability, Data and Computers	6	14	Scholarship Committee	-	-

Name of Staff Member			Employment Status	Part of Full time Position in Institution		Part of Full Time Position Statistics Department		Additional Employment (outside the institution)			Area of Specialization **(See Section 4.2 of Main Report)**	Courses under responsibility of the staff member			Additional Tasks in Institution	No. of Students Receiving Guidance (*)	
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Weekly Hours for Staff member		2nd Degree	3rd Degree
First	Family	Title (Dr, Ms, Mr)		Weekly Hours	Per Cent	Weekly Hours[1]	Per Cent		Weekly Hours	Per Cent							
												2. Principles and Applications in Statistical Analysis	5				
												3. Statistical Inference and Applications B	3				
Yosef	Rinott	Prof	Professor	Same		F		None				1. Probability and Random Processes	6	9	-	-	2
												2. Article Reading in Biostatistics	3				
Ya'acov	Ritov	Prof	Professor	Same		F		None				1. Advanced Statistical Models A	6	12	-	3	2
												2. Advanced Statistical Models B	6				
Benny	Yakir	Prof	Professor	Same		F		None				1. Gene Mapping	5	13	Teaching Committee	1	2
												2. Time Series Analysis	3				
												3. Computational Statistics	3				
												4. Computational Methods in Non Linear Optimization	2				
David	Zucker	Prof	Professor	Same		F		None				1. Regression, Statistical Applications and Computations	6	13	-	1	3
												2. Principles of Research Design and Sampling Methods	3				

Name of Staff Member			Employment Status	Part of Full time Position in Institution		Part of Full Time Position Statistics Department		Additional Employment (outside the institution)			Area of Specialization **(See Section 4.2 of Main Report)**	Courses under responsibility of the staff member			Additional Tasks in Institution	No. of Students Receiving Guidance (*)	
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Weekly Hours for Staff member		2nd Degree	3rd Degree
First	Family	Title (Dr, Ms, Mr)		Weekly Hours	Per Cent	Weekly Hours[1]	Per Cent		Weekly Hours	Per Cent							
												3. Statistical Models and their Analysis	4				

Table 2B

Junior Academic Staff Employed

Name of staff member			Employment Status	Part of Full Time Position **in Institution+**		Part of Full Time Position **in Program**+		Additional Employment (outside the institution)			Area of Specialization **(None As of Yet)**	Courses under responsibility of the staff member			Additional Tasks in Institution
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Credits for Teacher	
First	Family	Title		Weekly Hours	Per Cent	Weekly Hours	Per Cent		Weekly Hours	Per Cent					
Saar	Gershuni	Mr.	Assistant (MA student)	Same		F_MA						1. Statistical Inference and Applications A	2	6	
												2. Basics: Probability, Data and Computers	3		
												3. Statistical Models and their Analysis	1		
Aleksander	Vainer	Mr.	Assistant (MA student)	Same		F_MA						1. Advanced Statistical Models A	2	4	
												2. Advanced Statistical Models B	2		
Jonathan	Yefenof	Mr.	Assistant (MA student)	Same		2	50%					Probability and Random Processes	2	2	
Shmuel	Leavitt	Mr.	Junior Lecturer (PhD student)	Same		F_MA						Introduction to Statistics For Nursing Students	4	4	
Noam	Meir	Mr.	Assistant (MA student)	Same		3	75%					Basics: Probability, Data and Computers	3	3	
Oshrit	Munk	Mrs.	Assistant (MA student)	Same		2	50%					Principles and Applications in Statistical Analysis	2	2	
Daniel	Nevo	Mr.	Assistant (MA student)	Same		2	50%					Principles and Applications in Statistical Analysis	2	2	

Name of staff member			Employment Status	Part of Full Time Position **in Institution+**		Part of Full Time Position **in Program**+		Additional Employment (outside the institution)			Area of Specialization **(None As of Yet)**	Courses under responsibility of the staff member			Additional Tasks in Institution
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Credits for Teacher	
First	Family	Title		Weekly Hours	Per Cent	Weekly Hours	Per Cent		Weekly Hours	Per Cent					
Rinat	Nahum	Ms.	Assistant (MA student)	Same		1	25%					Introduction to Statistics I For Business Administration And Accountant Students	1	1	
Raphael	Nechemia	Mr.	Assistant (MA student)	Same		1	25%					Introduction to Statistics For International Studies And Political Science Students	1	1	
Anna	Sikov	Ms.	Assistant (PhD student)	Same		2	50%					1. Intro. To Probability and Statistics I	1	2	
												2. Intro. To Probability and Statistics II	1		
Vitally	Portnoy	Mr.	Assistant (MA student)	Same		3	75%					Basics: Probability, Data and Computers	3	3	
Irene	Kornilenko	Ms.	Assistant (MA student)	Same		3	75%					Basics: Probability, Data and Computers	3	3	
Geffen	Kleinstern	Ms.	Assistant (MA student)	Same		2	50%					Introduction to Statistics For Nursing Students	2	2	
Naomi	Kaplan	Ms.	Assistant (MA student)	Same		1	25%					Introduction to Statistics For International Studies And Political Science Students	1	1	
Liron	Ravner	Mr.	Assistant (MA student)	Same		3	75%					1. Intro. To Probability and Statistics I	1	3	
												2. Intro. To Probability and Statistics II	1		
												3. Introduction to Statistics For Communications Students	1		

Name of staff member			Employment Status	Part of Full Time Position **in Institution+**		Part of Full Time Position **in Program+**		Additional Employment (outside the institution)			Area of Specialization **(None As of Yet)**	Courses under responsibility of the staff member			Additional Tasks in Institution
								Name of Employer	Part of Full Time Position			Name of Course	Weekly Hours	Total Credits for Teacher	
First	Family	Title		Weekly Hours	Per Cent	Weekly Hours	Per Cent		Weekly Hours	Per Cent					
Dmitry	Rotshild	Mr.	Assistant (MA student)	Same		3	75%					Basics: Probability, Data and Computers	3	3	
Asaf	Sarig	Mr.	Junior Lecturer (PhD student)	Same		F_PhD						Introduction to Statistics I For Business Administration And Accountant Students	3	12	
												2. Introduction to Statistics For Communications Students	4		
												3. Introduction to Statistics II For Business Administration And Accountant Students	3		
												4. Introduction to Statistics For International Studies And Political Science Students	2		
Sarit	Agami	Ms.	Junior Lecturer (PhD student)	Same		4	50%					1. Introduction to Statistics II For Business Administration And Accountant Students	1	4	
												2. Introduction to Statistics For International Studies And Political Science Students	1		
												3. Introduction to Statistics For Chemistry Students	2		

F_PhD: Teaching assistants (PhD students) may tutor up to 22 weekly hours or give classroom lectures up to 8 weekly hours (full-time position).
F_MA: Teaching assistants (MA students) may tutor up to 22 weekly hours (half-time position).

Table 2C
External Teaching Staff - Senior

Name of Teacher			Employment Status	Yearly Teaching Units	Area of Specialization	Courses taught by the teacher	Additional Tasks in Institution
First	Family	Academic degree					
Arie	Ryter	Dr.	Guest Lecturer	3	Official Statistics	Sampling and Variance Estimation in Finite Populations	-

Table 2D
External Teaching Staff - Junior

Name of Teacher			Employment Status	Yearly Teaching Units	Area of Specialization	Courses taught by the teacher	Additional Tasks in Institution
First	Family	Academic degree					

6.3 Publication Record (Last 5 Years)

Chigansky,Pavel	
	Refereed Journal Papers
1.	P. Baxendale, P. Chigansky, R. Liptser, Asymptotic stability of the Wonham filter: ergodic and nonergodic signals, SIAM Journal on Control and Optimization, {\bf 43} (2004) no. 2, pp. 643 - 669
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5.	P. Chigansky, On filtering of Markov chains in strong noise, IEEE Trans. on Information Theory, Vol. 52, No. 9, (2006), pp. 4267- 4272
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8.	I. Adan and M. Haviv, "Conditional ages and residual service times in an M/G/1 queue," *Stochastic Models*
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2.	"Broadcasting forever," (with E. Altman), workshop on Control and Games in Queues, The Technion, Haifa, Israel, December 2008 (Invited talk)
3.	"To queue or not to queue: The cases of partially and fully observable M/G/1 queue," (plenary talk) *NET-COOP*, Avignon, France, June 2007 (Invited talk)
4.	"Computational schemes for two exponential servers where the first has a finite buffer," (with R. Zlotnikov), The Annual Meeting of the Operations Research Society of Israel, Jerusalem, May 2007 (contributed talk)
5.	"Queueing games: A tutorial," *International Society of Dynamic Games Meeting*, Nice, France, July 2006 (Invited talk)
6.	"The one-chance M/G/1 queues: A model with product form," *Networks, Queues, Performance and Stochastic Modeling (honoring Uri Yechiali in his retirement)*, Shefayim, Israel, May 2006 (Invited talk)
7.	"Waiting times in queues with relative priorities," (with J. van der Wal) The Annual Meeting of the Operations Research Society of Israel, Nahariya, May 2006 (contributed talk)

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8.	"Queueing games: A tutorial," *Performance 2005*, Juan-les-Pins, France, October 2005 (Invited talk)
9.	"On balking from an empty queue," (with Y. Kerner), mini-conference on *Competition with Delays*, University of Washington, St. Louis, MO., September 2005 (Invited talk)
10.	"On singularly perturbed Markov chains," a symposium on *Optimization and Data Analysis*, Canberra, Australia, September 2005 (Invited talk)
11.	"The price of anarchy: The case of an exponential multi-server," The Annual Meeting of the Operations Research Society of Israel, Caesarea, May 2005 (contributed talk)
12.	"On singularly perturbed Markov chains," *The 14th International Workshop on Matrices and Statistics*, Auckland, New Zealand, March 2005 (Invited talk)
13.	"To queue or not to queue," (plenary talk with R. Hassin), INRIA's PRIXNET workshop, Paris, France, November 2004 (Invited talk)
14.	"Who should be given priority," (with R. Hassin), a work shop on *Stochastic Models and Their Applications*, University of South Australia, Adelaide, Australia, September 2004 (Invited talk)
15.	"Who should be given priority," (with R. Hassin), a workshop on *The Economic Aspects of Congested Networks and Queues*, The University of Bonn, Germany, July 2004 (Invited talk)
16.	"To try or not to try: equilibrium behavior in a loss system," (with O. Kella and Y. Kerner), the Annual Meeting of the Israeli Society of Statistics, Haifa, May 2004 (Invited talk)
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8.	Boxma, O., Kaspi, H., Kella, O. and D. Perry. (2005). On/off storage systems with state dependent input, output and switching rates. *Probability in the Engineering and Informational Sciences.* **19**(1), 1-14.
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5.	Oman, S. D., Landsman, V. L., Carmel, Y. and Kadmon, R. (2007), "Analyzing spatially distributed binary data using independent-block estimating equations", Biometrics 63, 892-900.
6.	Oman, S. D., Vakulenko-Lagun, B., "Estimation of sill matrices in the linear model of coregionalization", Mathematical Geosciences, http://www.springerlink.com/content/0882-8121, Online First.
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6.	Pollak, M. and Tartakovsky, A. G. (2008) Asymptotic Exponentiality of the Distribution of First Exit Times for a Class of Markov Processes with Applications to Quickest Change Detection. Teorya Veroyatnostya y Primeneniya 53 (to appear. 16 pages)
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	Books and Book Chapters
1.	Work in progress: Book: Detecting a Change. With Benjamin Yakir.
	Conference Proceedings
1.	Pollak, M. (2007). Nonparametric detection of a change. Proceedings of the 56th ISI Conference, Lisbon
2.	Pollak, M. (2008). סקירה של שיטות ניטור סטטיסטיות (SPC) שפותחו ב-20 השנים האחרונות הכינוס ה-15 להנדסת תעשיה וניהול, תל אביב

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1.	Pollak, M. (2006). Discussion of "Detection of intrusions in information systems by sequential change-point methods …By A. Tartakovsky et al. Statistical Methodology 3 325-326.
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1.	Y Malinovsky, Y Rinott: Prediction of ordered random effects in a simple small area estimation model. To appear in Statistica Sinica, April 2010.
2.	C Di Serio, Y Rinott, and M Scarsini: Di Serio, C., Rinott Y., and Scarsini, M. (2009). *Simpson's paradox in survival models.* Scandinavian Journal of Statistics 36 463-480.
3.	S Hart, Y Rinott, and B Weiss (2008): Evolutionarily Stable Strategies of Random Games, and the Vertices of Random Polygons. Annals of Applied Probability 18, 259-287
4.	L Goldstein, Y Rinott (2007): Functional BRK Inequalities, and their Duals, with Applications. Journal of Theoretical Probability 20 275-293.

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Ritov, Ya'acov	
	Refereed Journal Papers
1.	Elias, S, Ritov, Y. and Bergman, H. Balance of increases and decreases in firing rate of the spontaneous activity of basal ganglia high-frequency discharge neurons. Journal of Neurophysiology,
2.	E. Greenshtein and Y. Ritov (2008). Asymptotic efficiency of simple decisions for the compound decision problem, The 3rd Lehmann Symposium, IMS Lecture-Notes Monograph series. J. Rojo, editor. Accepted.
3.	R. Douc, E. Moulines, Y. Ritov (2008) Forgetting of the initial condition for the filter in general state-space hidden Markov chain: a coupling approach Electronic J. of Probability
4.	Peter J. Bickel, Ya'acov Ritov (2008) Response to Mease and Wyner, Evidence Contrary to the Statistical View of Boosting, JMLR 9:131–156, 2008: And Yet It Overfits. Journal of Machine Learning Research 9 (2008) 181-186.
5.	Peter J. Bickel, Ya'acov Ritov, and Alexandre Tsybakov (2008). Simultaneous analysis of Lasso and Dantzig selector, Annals of Statistics, Accepted
6.	Yair Goldberg, Alon Zakai, Dan Kushner, and Ya'acov Ritov (2008): Manifold learning:: the price of normalization? JMLR 9(Aug):1909--1939, 2008
7.	Ya'acov Ritov (2007): Comments following Candes and Tao: The Dantzig selector:statistical estimation when p is much larger than n
8.	Y. Rabinowicz, I. Roman, and Y. Ritov (2007): "ADVANCED METHODOLOGY FOR ASSESSING DISTRIBUTION CHARACTARISTICS OF PARIS EQUATION COEFFICIENTS TO IMPROVE FATIGUE LIFE PREDICTION" *Fatigue and Fracture ofEngineering Materials and Structures*
9.	Eitan Greenshtein, Junyong Park, Ya'acov Ritov (2008): Estimating the mean of high valued observations in high dimensions., JSTP
10.	P. J. Bickel, Y. Ritov, and A. Zakai (2005): ``Some theory for generalized boosting algorithms" *Journal of Machine Learning Research*, **7**, 705--732
11.	Michal Rivlin-Etzion, Ya'acov Ritov, Gali Heimer, Hagai Bergman, Izhar Bar-Gad (2005) ``Local shuffling of spike trains boosts the accuracy of spike train spectral analysis", *Journal of Neurophysiology,* **95**, 3245-3256.
12.	Greenshtein, E. and Ritov, Y. (2004) ``Persistency in high dimensional linear predictor-selection and the virtue of over-parametrization", Bernoulli, 10, 971--9
13.	• Sklan, E.H, Lowenthal, A., Korner, M., Ritov, Y., Rankinen, T., Bouchard, C., Leon, A.S., Rao, D.C., Wilmore, J.H., Skinner, J.S. and Soreq, H. (2004). Acetylcholinesterase/paraoxonase genotype and expression predict anxiety scores in Health, Risk Factors, Exercise Training, and Genetics study. PNAS, 101, 5512-5517.
14.	Bryan G. Reuben , Ya'acov Ritov, Orit Geller, Melinda A. McFarland, Alan G. Marshall, Chava Lifshitz (2004): Applying a new algorithm for obtaining site specific rate constants for H/D exchange of the gas phase proton-bound arginine dimer; Chemical Physics

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	Letters, 380, 88-94
15.	G. Mosheiov, D. Oron, Y. Ritov (2005), Minimizing flow-time in a single machine with integer batch sizes. *Operation Research Letters*, **33**, 497-501.
16.	P. J. Bickel, Y. Ritov, and T. Stoker (2006): Tailor-made Tests for Goodness-of-Fit to Semiparametric Hypotheses.Annals of Statistics, **34**, 721-741
17.	G. Mosheiov, D. Oron, Y. Ritov (2004), Flow-shop scheduling with indentical processing-time jobs. Naval Research
18.	Elias, S, Ritov, Y. and Bergman, H. Balance of increases and decreases in firing rate of the spontaneous activity of basal ganglia high-frequency discharge neurons. Journal of Neurophysiology
	Books and Book Chapters
1.	Michel BRONIATOWSKI, Alexandre DEPIRE and Ya'acov RITOV (2008). Bivariate Cox Models, Mathematical Methods in Survival Analysis, Reliability and Quality of Life, Edited by C. Huber N. Limnios M. Mesbah and M. Nikulin. Wiley
2.	Jon A.Wellner,Chris A.J.Klaassen,Ya'acov Ritov (2006): Semiparametric Models:a Review of Progress since BKRW (1993)., .In *Frontier of Statistics*, J. Fan and H. L Koul (edts.) pp. 25-44.
3.	Kjell Doksum and Ya'acov Ritov (2006): Our steps on the Bickel way. In *Frontier of Statistics*, J. Fan and H. L Koul (edts.) pp. 1-24.
4.	Yoel Haitovsky, Hans, Rudolf Lerche, Ya'acov Ritov (edt.) (2003): Foundations of Statistical Inference. Physica-Verlag, Heidelberg.
5.	P. J. Bickel, Y. Ritov, and T. Stoker: Nonparametric testing of an index model. , Rothenberg Festschrift, D. Andrews J. Stock (edts.) Cambridge University Press.
	Conference Proceedings
1.	Y. Goldberg and Y. Ritov (2008): LLE with low dimensional neighborhood. 4th International Symposium on Visual Computing (ISVC08). To appear.
2.	Daniel Gill, Ya'acov Ritov, and Gideon Dror (2007): Is Pinocchio's Nose Long or His Head Small? Learning Shape Distances for Classification. To appear in the proceeding of the 3rd, pringer-Verlag in the Lecture Notes in Computer Science (LNCS) series,
3.	Alon Zakai and Ya'acov Ritov (2008): How Local Should a Learning Method Be? COLT 2008
4.	• Thomas Trigano, Uri Israeles, and Ya'acov Ritov: Semiparametric shift estimation for alignment of ECG data. EUSIPCO 2008.

Yaikr, Benjamin	
	Refereed Journal Papers
1.	Grossman S., **Yakir, B**. (2004). Large deviations for global maxima of independent superadditive processes with negative drift and an application to optimal sequence alignment, *Bernoulli*. 5(10), 829-845.
2.	Shifman S, Bronstein M, Sternfeld M, Pisante A, Weizman A, Reznik I, Spivak B, Grisaru N, Karp L, Schiffer R, Kotler M, Strous RD, Swartz-Vanetik M, Knobler HY, Shinar E, **Yakir B**, Zak NB, Darvasi A. (2004). COMT: A common susceptibility gene in bipolar disorder and schizophrenia. *Amer. J. Med. Genet. B.* 128B(1) 61-64.
3.	Devor M, Gilad A, Arbilly M, Yakir B, Raber P, Pisante A, Darvasi A. (2005). pain1: a neuropathic pain QTL on mouse chromosome 15 in a C3HxC58 backcross. *Pain*. 116(3), 289-93.
4.	Leshinsky-Silver E, Karban A, Buzhakor E, Fridlander M, Yakir B, Eliakim R, Reif S, Shaul R, Boaz M, Lev D, Levine A. (2005). Is age of onset of Crohn's disease governed by mutations in NOD2/caspase recruitment domains 15 and Toll-like receptor 4? Evaluation of a pediatric cohort. *Pediatr Res.* 58(3), 499-504.
5.	Levine A, Shamir R, Wine E, Weiss B, Karban A, Shaoul RR, Reif SS, Yakir B, Friedlander M, Kaniel Y, Leshinsky-Silver E. (2005). TNF promoter polymorphisms and modulation of growth retardation and disease severity in pediatric Crohn's disease. *Am J Gastroenterol*. 100(7), 1598-604.
6.	Levine A, Karban A, Eliakim R, Shaoul R, Reif S, Pacht A, Wardi J, Yakir B, Silver EL. (2005), A polymorphism in the TNF-alpha promoter gene is associated with pediatric onset and colonic location of Crohn's disease.*Am J Gastroenterol*. 100(2), 407-13.
7.	Siegmund D, **Yakir, B.** (2005). An urn model of Diaconis. *Ann. Probab.* 5(33) 2036-2042.
8.	Shifman S, Levit A, Chen M-L, Chen C-H, Bronstein M, Weizman A, **Yakir B**, Navon R, and Darvasi A. (2006). A complete genetic association scan of the 22q11 deletion region and functional evidence reveal an association between DGCR2 and schizophrenia. *Human Genetics* 120, 160-70.
9.	Devor M, Gilad A, Arbilly M, Nissenbaum J, Yakir B, Raber P, Minert A, Pisante A, Darvasi A. (2007). Sex-specific variability and a 'cage effect' independently mask a neuropathic pain quantitative trait locus detected in a whole genome scan. *Euro. J. Neuro.* 26(3) 681-688.
10.	Salonen, JT, Uimari, P, Aalto, JM, Pirskanen, M, Kaikkonen, J, Todorova, B, Hyppönen, J, Korhonen, VP, Asikainen, J, Devine, C, Tuomainen, TP, Luedemann, J, Nauck, M, Kerner, W, Stephens, RH, New, JP, Ollier, WE, Gibson, JM, Payton, A, Horan, MA, Pendleton, N, Mahoney, W, Meyre, D, Delplanque, J, Froguel, P, Luzzatto, O, **Yakir, B** and Ariel Darvasi (2007). Type 2 Diabetes Whole-Genome Association Study in Four Populations: The DiaGen Consortium. *Am. J. Hum. Genet.,* 81:338-345.
11.	Siegmund D, and **Yakir B.** (2007). Approximating the variance of the conditional probability of the state of a hidden Markov model. *Stat. App. Genet. Molec. Bio.* 6(1), e18.
12.	Shi, J, Siegmund D, and **Yakir B.** (2007). Importance sampling to estimate p-values in linkage analysis. JASA. 102(479), 929-937.

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13.	Dupuis J, Siegmund D, and **Yakir B.** (2007). A unified framework for linkage and association analysis of quantitative traits. *PNAS*, 104(51), 20210-20215.
14.	Nardi, Y, Siegmund, D, and **Yakir B.** (2008). The distribution of maxima of approximately Gaussian random fields. *Ann. Statist.,* 36(3), 1375-1403.
15.	Siegmund D, and **Yakir B.** (2008). Minimax optimality of the Shiryayev-Roberts change-point detection rule. *J. Statist. Planning and Inference*138: 2815-2825.
16.	Siegmund D, and **Yakir B.** (2008). Detecting the emergence of a signal in a noisy image. *Statistics and Its Interface.* 1(1): 3-12.
17.	Bronstein M, Pisanté A, **Yakir B** and Darvasi A. (2008). Type 2 diabetes susceptibility loci in the Ashkenazi Jewish population. Human Genetics, 124(1), 101-104.
18.	**Yakir B.** (2008). Discussion on "Is average run length to false alarm always an informative criterion?" by Yajun Mei. *Sequential Analysis.*
	Books and Book Chapters
1.	**Yakir, B.** (2004). Associating COMT with schizophrenia: Statistical tools in population-based genetic studies. In Bioinformatics, J. Seckbach (ed.), COLE series, Vol 7.
2.	**Yakir B**, Pisanté A, Darvasi A (2005) Statistical Theory in QTL Mapping, in: Computational Genetics and Genomics Tools for Understanding Disease (Ed: Peltz G) pp.33-50, Humana Press.
3.	Siegmund D, **Yakir B.** (2007). The Statistics of Gene Mapping, Springer, New-York.
	Conference Proceedings
1.	**Yakir, B.** (2008). Optimal detection of movement. Proceedings of the IWAP conference.

Zucker, David	
	Refereed Journal Papers
1.	Lieberman O, Rousseau J, **Zucker DM**. (2003) Valid asymptotic expansions for the maximum likelihood estimator of the parameter of a stationary, Gaussian, strongly dependent process. *Annals of Statistics* 31:586-612.
2.	**Zucker DM**, and Spiegelman, D. (2004). Inference for the proportional hazards model with misclassified discrete-valued covariates. *Biometrics* 60:324-334.
3.	Manor O and **Zucker DM**. (2004). Small sample inference for the fixed effects in the mixed linear model. *Computational Statistics and Data Analysis* 46:801-817.

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4.	Tian L, **Zucker DM**, and Wei LJ. (2005). On the Cox model with time-varying regression coefficients. *Journal of the American Statistical Association* 100:172-183.
5.	**Zucker DM**. (2005). A pseudo partial likelihood method for semi-parametric survival regression with covariate errors. *Journal of the American Statistical Association* 100:1264-1277.
6.	Rosen L, Manor O, Engelhard D, Brody D, Rosen B, Peleg H, Meir M, **Zucker D**. (2006).Can a handwashing intervention make a difference? Results from a randomized controlled trial in Jerusalem preschools. *Preventive Medicine* 42:27-32.
7.	**Zucker DM** and Yang S. (2006). Inference for a family of survival models encompassing the proportional hazards and proportional odds models. *Statistics in Medicine* 25: 995-1014.
8.	Doniger G, Dwolatzky T, **Zucker DM**, Chertkow H, Crystal H, Schweiger A, Simon ES. (2006). Computerized cognitive testing battery identifies MCI and mild dementia even in the presence of depressive symptoms. *American Journal of Alzheimer's Disease and Other Dementias* 21: 28-36.
9.	Rosen L, Manor O, Engelhard D, **Zucker D**. (2006). In defense of the randomized controlled trial for health promotion research. *American Journal of Public Health* 96:1181-1186.
10.	Gorfine M, **Zucker DM**, and Hsu L. (2006). Prospective survival analysis with a general semiparametric shared frailty model: a pseudo full likelihood approach. *Biometrika* 93:735-741.
11.	Rosen L, Manor O, Englehard D, **Zucker D**. (2006). Design of the Jerusalem Handwashing Study: meeting the challenges of a preschool-based public health intervention trial. *Clinical Trials* 3:376-384.
12.	**Zucker DM**, Gorfine M, Hsu L. (2008). Pseudo full likelihood estimation for prospective survival analysis with a general semiparametric shared frailty model: asymptotic theory. *Journal of Statistical Planning and Inference* 138:1998-2016.
13.	**Zucker DM,** and Spiegelman, D. (2008). Corrected score estimation in the proportional hazards model with misclassified discrete covariates. *Statistics in Medicine* 27:1911-1933.
14.	Rosen LJ, **Zucker D**, Rosenberg H, Connolly G. (2008). Environmental tobacco smoke in Israeli bars, pubs, and cafes. *Israel Medical Association Journal*, to appear.
15.	Gorfine M, **Zucker DM**, Hsu L. (2008). Case-control survival analysis with a general semiparametric shared frailty model: a pseudo full likelihood approach. Accepted for publication in *Annals of Statistics.*
	Books and Book Chapters
1.	**Zucker DM**. (2004). Cluster randomization. In *Contemporary Advances in Clinical Trials Biostatistics* (Geller, N, ed). New York: Marcel Dekker, pp. 83-100.
	Conference Proceedings
1.	**Zucker DM**, and Spiegelman D. (2008). Corrected score estimation in the Cox regression model with misclassified discrete covariates. In *Statistical Models and Methods for Biomedical and Technical Systems* (Vonta F, Nikulin M, Limnios N, Huber C, eds). Boston:

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	Birkhauser. [Proceedings of Biostat 2006 conference in Limassol, Cyprus.]
	Others
1.	**Zucker DM**. “Permutation tests in Clinical Trials” – entry in the Wiley *Encyclopedia of Clinical Trials*.

6.4 Research Grants (Last 5 Years)

Zvi Gilula				
Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
Probabilistic Models for Multiple Correspondence Analysis	Shelby Haberman ETS, Princeton	yes	2004-2007	86,000
Categorical Data Fusion	Peter Rossi, Chicago Robert McCulloch, Austin	yes	2006-2009	94,000

Haviv, Moshe					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Israel Science Foundation, Grant no. 237/02 for research on "Equilibrium behavior in queues"	R. Hassin	Yes	2002-2007	200,000
2.	Israel Science Foundation, Grant no. 401/08 for research on "Cooperative games in production systems, inventories and queues"	S. Anily	Yes	2008-2011	80,000
3.	Hebrew University "Experiments in queueing games"		Yes	2008-2009	3,500

Kella, Offer					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Stochastic Storage Models and Networks in a Random Environment		Yes	2003-2006	87270

2.	Reflected Networks, Stability and Martingale Analysis	Wolfgang Stadje, University of Osnabrueck	Yes	2004-2006	119500
3.	Storage Models and Networks with Stochastic Reflecting Constraints		Yes	2006-2009	84000

Motro, Uzi

	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	The evolutionary ecology of social and self learning: theory and experiments in house sparrows	1) Professor Arnon Lotem, Department of Zoology, Tel Aviv University 2) Professor Marcus W. Feldman, Department of Biological Sciences, Stanford University	Yes	4 years (2005-2009)	$156,000
2.	The ecology and behavior of the Short-toed Eagle in the Judean Hills			2 years (2007-2008)	Ca $20,000

Nirel, Ronit					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Assessment of cardiovascular and respiratory effects of air pollutants from the Ramat Hovav area in the surrounding population.	L. Fiermann, The Tel Aviv Sourasky Medical center; A. Peretz, Clalit Health Services	Yes	2009	50,000
2.	Survival patterns in the Israel National Study of childhood acute lymphoblastic leukemia	---	No	2007-2009	95,000
3.	Air quality in Gush Dan: Analyzing the relative contribution of different meteorological conditions to the spatio-temporal distribution of air pollutants	U. Dayan, Gegraphy Department, Hebrew University; I. Marer Hebrew University	Yes	2008	23,000
4.	Associations between respiratory hospitalizations of children in Jerusalem and residential exposure to traffic air pollution using GIS	---	Yes	2007	2,000

Pfeffermann, Danny					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Inference on Treatment Effects in Observational Studies Utilizing Survey Sampling Inference Approaches. *The Israel Academy of Sciences and Humanities*.	None	Yes	2005-2008	75,000
2.	Estimation and Imputation Under Nonignorable Nonresponse. *The Falk Institute*	None	Yes	2007	10,000
3.	Estimation and Imputation Under Nonignorable Nonresponse. *United States-Israel binational Science Foundation*	Professor Malay Ghosh, Department of Statistics, University of Florida, Ganesville, USA	Yes	2007-2010	60,000

Pollak, Moshe					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Memory-Parsimonious Changepoint Detection Schemes	---	Yes	2002-2006	ca $100,000
2.	Nonparametric Methods for Detecting a Change in Distribution	---	Yes	2008-2012	ca $65,000

Rinott, Yosef					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Israel Science Foundation		Yes	2004-2009	130,000

2.	Israel Bureau of Stat (IBS)		No	2007-2008	6,000

Ritov, Ya'acov					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	ISF	---	Yes	2000-2004	
2.	ISF	---	Yes	2003-2006	
3.	ISF	---	Yes	2006-2009	

Yakir, Benjamin					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Statistical computations in computational biology and genetics	David Siegmund, Statistics, Staford	Yes	2001-2004	60,000
2.	Multidisciplinary approach to probe effect of SNP on 3D structure	J. Sussmann (WIZ), J. Beckman (WIZ), and A. Darvasi (HUJI)	Yes	2001-2004	200,000
3.	Mapping the genetic component of chronic pain in rodents	A. Darvasi, Genetics, HUJI	Yes	2002-2006	230,000
4.	Statistical computations in biology and genetics	David Siegmund, Statistics, Stanford	Yes	2007-2011	70,000

Zucker, David					
	Title	**Collaborators** Name and full affiliation	**Competitive** Yes/No	**Period** Years	**Total Budget** (US $)
1.	Measurement Errors in Cancer Epidemiology	Donna Spiegelman, Depts of Epidemiology and Biostatistics, Harvard School of Public Health	Yes	2006-2009	~$120,000
2.	Statistical Methods for Case-Control Family Studies	Malka Gorfine, Technion Li Hsu, Fred Hutchinson Cancer Research Center	Yes	2005-2008	$60,000

6.5 Research Collaborations (Last 5 Years)

Gal, Elidan		
	Collaborator Name and full affiliation	**Project Title**
1.	Prof. Stephen Smith, Stanford University	Characterizing brain synapses
2.	Prof. Mike Weiner, UCSF	Alzheimer's detection via analysis of the Hippocampal sub-fields
3.	Prof. Daphne Koller, Stanford University	Descriptive analysis of images
4.	Prof. Ramin Zabih, Cornell University	Refined identification of liver cirrhosis
5.	Prof. Joseph Elidan, Hadassah Hospital	Motion analysis of the vocal folds
6.	Prof. Nir Friedman, Hebrew University	Learning continuous Bayesian networks
7.	Prof. Mark Horowitz, Stanford University and Prof. Kenneth Downing, Berkeley	Electronic Tomography Image Alignment
8.	Prof. Nir Friedman and Prof. Hanna Margalit, Hebrew University	Learning Protein-Protein interaction networks
9.	Prof. Daphne Koller, Stanford	Multi-class segmentation with relative location prior
10.	Prof. Daphne Koller, Stanford University and Dr. Gal Chechik, Bar Ilan University	Max-margin classification of incomplete data
11.	Prof. Daphne Koller	Convex Hierarchical Bayes for Transfer Learning
12.	Prof. Daphne Koller	Message schedules and decomposition strategies for propagation-based inference
13.	Prof. Nir Friedman	Information Bottleneck EM
14.	Prof. Nir Friedman	Protein-DNA binding site p-value estimation

Zvi Gilula	
Collaborator Name and full affiliation	**Project Title**
Shelby Haberman, ETS, Princeton	Multivariate Canonical Forms

Peter Rossi, Univ. of Chicago	Overcoming heterogeneous resposenses
Robert McCulloch, Univ. of Texas, Austion	High-dimensional Data Fusion

Haviv, Moshe	
Collaborator Name and full affiliation	**Project Title**
J. van der wal, University of Technology, Eindhoven	Waiting times in queues with relative priorities
T. Roughgarden, Stanford University	The price of anarchy: the case of an exponential multi-server
I. Adan, University of Technology, Eindhoven	Conditional ages and residual service times in an M/G/1 queue
J. van der wal, University of Technology, Eindhoven	Mean waiting times for phase type discriminatory processor sharing
Y. Kerner, EURANDOM	On balking from an empty queue
S. Anily, Tel Aviv University	Cost allocation problem for the first order interaction joint replenishment model
R. Hassin, Tel Aviv University	Who should be given priority in a queue?
K. E. Avrachenkov, INRIA	The highest singular coefficients in singular perturbation of stochastic matrices
E. Altman, INRIA	Broadcasting Forever

Mandel, Micha		
	Collaborator Name and full affiliation	**Project Title**
1.	Elisheva Simchen, Inbal Salz, Ronen Fluss, Ministry of Health Israel	Hospital acquired infections in Israel

Motro, Uzi		
	Collaborator Name and full affiliation	**Project Title**

1.	Professor Yoram Yom Tov, Department of Zoology, Tel Aviv University	1) Ecology of nocturnal raptors in Israel 2) The effect of *Acacia saligna* and dune stabilization on the rodent populations in the coastal sands 3) Behavioral responses of red foxes to the presence of golden jackals
2.	Dr. Eli Geffen, Department of Zoology, Tel Aviv University	Behavioral responses of red foxes to the presence of golden jackals
3.	Dr. Yossi Leshem, Department of Zoology, Tel Aviv University	Effect of agriculture on the ecology of the Short-toed Eagle in the Judean Hills, Israel
4.	Professor Arnon Lotem, Department of Zoology, Tel Aviv University	The evolutionary ecology of social and self learning in the house sparrow
5.	Professor Marcus W. Feldman, Department of Biological Sciences, Stanford University	The evolutionary ecology of social and self learning in the house sparrow
6.	Dr. Rachel Ben Shlomo, Department of Biology, University of Haifa at Oranim	Population genetics of the colonial urochordate *Botryllus schlosseri*
7.	Professor David Saltz, Mitrani Dept. of Desert Ecology, The Institute for Desert Research, Ben Gurion University of the Negev, Sde Boqer Campus	1) Ecology and behavior of the lesser kestrel 2) Reintroduction of Persian fallow deer in the Soreq Valley

Nirel, Ronit		
	Collaborator Name and full affiliation	**Project Title**
1.	B Stark, Schneider Children's Medical Center of Israel	Survival patterns in the Israel National Study of childhood acute lymphoblastic leukemia
2.	M. Beller and H. Glickman, Ministry of Education, Israel	National and international sample surveys in the education system
3.	G Nathan and D Pfefferman, Statistics Department, Hebrew University	Correcting biases in internet panels frames
4.	M Sznajder and L Ronigen, Political Sciences Department, Hebrew University	Patterns of presidential exiles in Latin and South America
5.	D Zucker, Statistics Department, Hebrew University	The effect of a tansmucosal herbal periodontal patch on gingival inflammation
6.	H Schmid, School of Social Work, Hebrew University	Advocacy activities in nonprofit human service organizations: Implications for policy
7.	D Sharon, Earth Sciences Institute, Hebrew University	A regional approach to the study of climate fluctuations in Israel
8.	R Granot, Musicology Department, Hebrew University	Perception of large scale musical patterns
9.	U Dayan, Geography Department, Hebrew University	Air quality in Gush Dan: Analyzing the relative contribution of different meteorological conditions to the spatio-temporal distribution of air pollutants
10.	M Schiff, School of Public Health, Hebrew University, Jerusalem	Associations between respiratory hospitalizations of children in Jerusalem and residential exposure to traffic air pollution using GIS.

Pfeffermann, Danny		
	Collaborator Name and full affiliation	**Project Title**
1.	Professor Malay Ghosh, Department of Statistics, University of Florida, Ganesville, USA.	Estimation and Imputation under Not Missing at Random (NMAR) Nonresponse.
2.	DR. Pedro Silva, University of Southampton, UK.	Modeling of Complex Survey Data under Informative Sampling and Nonresponse

Pollak, Moshe		
	Collaborator Name and full affiliation	**Project Title**
1.	Professor Gary Lorden, The California Institute of Technology	Parsimonious Changepoint Detection
2.	Professor Alexander G. Tartakovsky, The University of Southern California	An Optimality Property of the Shiryaev-Roberts Procedure
3.	Professor Ester Samuel-Cahn, The Hebrew University of Jerusalem	Sequential Selection
4.	Professor Abba M. Krieger, The University of Pennsylvania	Sequential Selection
5.	Professor Benjamin Yakir, The Hebrew University of Jerusalem	Changepoint Detection

Rinott, Yosef		
	Collaborator Name and full affiliation	**Project Title**
1.	Marco Scarsini, LUISS Rome, Italy	Inequalities, Game theory, Sampling design for Monte Carlo estimation
2.	Larry Goldstein, USC	Inequalities, Sampling design for Monte Carlo estimation, Stein's method.
3.	C. Di Serio, Università Vita-Salute San RaRaffaele, Italy	Inequalities - Simpson's paradox, data
4.	Natalie Shlomo, U of Southampton	Statistical disclosure control
5.	S. Hart and B. Weiss, Hebrew U.	Game theory - probability
6.	Micha Mandel, Hebrew U.	Sampling biases, and foundations.
7.	Yaakov Malinovski, Hebrew U.	Estimation of ordered parameters in SAE

Ritov, Ya'acov		
	Collaborator Name and full affiliation	**Project Title**

1.	Peter Bickel	Misc.
2.	Eric Moulines	Misc.
3.	M. Broniatowski	Misc.
4.	H. Bergman	Misc.

Yakir, Benjamin

	Collaborator Name and full affiliation	**Project Title**
1.	David Siegmund, Statistics, Stanford	Statistical genetics and change-point detection (several projects)
2.	Moshe Pollak, Statistics, HUJI	Sequential change-point detection
3.	Ariel Darvasi, Genetics, HUJI	Gene mapping in human and rodents.
4.	Sagiv Shifman, Genetics, HUJI	Gene mapping and analysis of sequence data
5.	Josee Dupuis, Biostatistics, Boston U.	Statistics of gene mapping (joint with D. Siegmund)
6.	Nancy Zhang, Statistics, Stanford	Copy number variation (joint with D. Siegmund)

Zucker, David

	Collaborator Name and full affiliation	**Project Title**
1.	Donna Spiegelman and colleagues	Measurement Errors in Cancer Epidemiology
2.	Malka Gorfine and Li Hsu	Statistical Methods for Case-Control Family Studies

6.6 Graduate Students (Last 5 Years)

Zvi Gilula				
Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
Dana August	Ordinal Data Models	MA		2009
Gefen Kleinstern	Ecological correlation	MA		In progress
Alon Shapira	A new methodology for detection and standardizing heterogeneous responses	PhD		In progress

Haviv, Moshe				
Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
Kerner, Yoav	Decision making in queue under partial information	Ph.D	Hebrew University Rector's prize, ISF grant no. 237/02	2008
Zlotnikov, Rita	Computational schemes for two exponential servers where the first has a finite buffer	M.Sc		2005
Avidov, Tomer	Singular perturbation and games	M.Sc		2004

Kella, Offer					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**

1.	Ariel Manzura	Stochastic storage models	Ph.D.	ISF	ongoing

Mandel, Micha

	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Ilan Tsitsianov	Rank tests for clustered data	MA		
2.	Aliza Rosenberg	Transitional models vs. survival models	MA		
3.	David Azriel	Dose finding	PhD		

Motro, Uzi

	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Remarks**	**Year of Graduation**
1.	Brosh, Tzahala	Cultivated, semi-cultivated and natural fields as foraging areas of the Lesser Kestrel (*Falco naumanni*) in northern Israel	M.A.	Joint supervision with D. Saltz	2004
2.	Yoel, Hila	The effect of age, sex and origin on the survival and dynamics of the Griffon Vulture (*Gyps fulvus*)	M.A.	Joint supervision with O. Bahat	2004
3.	Pe'er, Guy	Spatial and behavioral determinants of butterfly movement patterns in topographically complex landscapes	Ph.D.	A student of Ben-Gurion University, joint supervision with D. Saltz	2004
4.	Anglister, Nili	The impact of dune stabilization and *Acacia saligna* invasion on rodents populations in Ashdod-Nitzanim dunes	M.A.	A student of Tel-Aviv University, joint supervision with Y. Yom-Tov	2005

Motro, Uzi					
5.	Bobek, Orli	The role of nest-site micro-climatic conditions and parents experience on nesting success in the Lesser Kestrel (*Falco naumanni*)	M.A.	Joint supervision with D. Saltz	2005
6.	Leader, Zohar	The diet of the Long-eared Owl (*Asio otus*) in the Negev desert, and a comparison with the diet of the Barn Owl (*Tyto alba*)	M.A.	Joint supervision with Y. Yom-Tov	2005
7.	Ra'anan, Noam	The Nubian Ibex (*Capra nubiana*) in the Negev: Reactions to human disturbance	M.A.	Joint supervision with D. Saltz and Y. Shkedy	2005
8.	Yaniv, Osnat	A game theoretical approach to time dependent animal conflicts	Ph.D.		2005
9.	Bensimhoun, Miriam	Parent-offspring conflict in the harvester ant between workers and young queens, regarding the timing of nuptial flight.	M.A.		2006
10.	Belmaker, Miriam	Mammalian community structure through time: Ubediya (a Lower Pleistocene site) as a case study	Ph.D.	Joint supervision with E. Tchernov and O. Bar-Yosef	2006
11.	Guthrie, Nurit	Mobbing: Persuading the predator to leave, or gaining prestige? – Mathematical models for these two alternatives.	M.A.		2007
12.	Zidon, Royi	The reintroduction of the Persian fallow deer (*Dama mesopotamica*) to the Soreq Valley: the mutual influence between the reintroduced	M.A.	Joint supervision with D. Saltz	2007

Motro, Uzi					
		animal and the surrounding habitat.			
13.	Gal, Adiv	Decision making under different environmental conditions during nesting in the Lesser Kestrel (*Falco naumanni*)	Ph.D.	Joint supervision with D. Saltz	2007
14.	Seifan, Tal	Long-term influences of decision-making: Plant-pollinator interactions and their outcomes	Ph.D.	Joint supervision with Y. Kareev	2008
15.	Darawshi, Sameh	Aggregation, movement dynamics and feeding habits of the Short-toed Eagle (*Circaetus gallicus*) in relation to human agricultural activities in the Judean Hills	M.A.	Joint supervision with Y. Leshem	
16.	Hermon, Dalia	A DNA database of goats for forensic identification	M.A.	Joint supervision with G. Kahila Bar-Gal	
17.	Arbily, Michal	Theoretical models in the evolution of learning behavior	Ph.D.	A student of Tel-Aviv University, joint supervision with A. Lotem	
18.	Katsnelson, Edith	The evolutionary ecology of social and self learning in the House Sparrow (*Passer domesticus*).	Ph.D.	A student of Tel-Aviv University, joint supervision with A. Lotem	
19.	Sella, Guy	Models of population genetics	Post-Doc	Joint supervision with I. Pitowsky	2005
20.	Perelberg, Amir	Chimpanzee cooperation	Post-Doc		

Nirel, Ronit					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Schiff, Michal	Associations between respiratory hospitalizations of children in Jerusalem and residential exposure to traffic air pollution using GIS	M.A	Shayne Center	
2.	Aphlalo, Talila	Multivariate time series models for air quality processes	M.A	None	

Oman, Samuel D.					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Vakulenko-Lagun, Bella	Methods for Multivariate Spatial Data	M. A.		2009 (anticipated)
2.	Shmeltzer, Matan	Factor Analysis for Spatially Correlated Variables with Mixture Distributions	M. A.		

Pfeffermann, Danny					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Weisam Abu Ahmad	Parametric and nonparametric approaches for seasonal adjustment	MA		2003
2.	Abu Ghosh Sharif	Outlier detection in seasonal adjustment performed by X-11	MA		2008
3.	Braverman Alexander	Joint multiplicative and additive Modeling of times series with benchmark constraints	MA		2009
4.	Buchris Tsofia	Comparison of different approaches for analytic inference from complex sample surveys			2009
5.	Landsman Victoria	Estimation of Treatment Effects in Observational Studies by Fitting Models Generating the Sample Data	PhD	Israel Science Foundation	2008
4.	Sikov Anna	Estimation and Imputation under Nonignorable Nonresponse	PhD	USA-Israel Binational Science Foundation	2010

Rinott, Yosef					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Natalie Sholomo	Statistical disclosure control	MA	Worked at IBS	2004
2.	Natalie Sholomo	Statistical disclosure control	PhD	Worked at IBS	2007
3.	Micha Mandel	Sampling biases	PhD	ISF grant	2004
4.	David Azriel	Phase I sampling design	MA	ISF	2008
5.	David Azriel	Phase I sampling design	PhD	ISF	current
6.	Yaakov Malinovsky	EM Algorithm	MA	ISF	2003
7.	Yaakov Malinovsky	Sampling and estimation problems	PhD	ISF	current
8.	Zohar Rechnizer	Stochastic dominance and risk	MA		2008

Ritov, Ya'acov					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Uri Israelis	Mixture of HMMs	MA	ISF	
2.	Saar Gershuni	Sparse regression	MA	ISF	-
3.	Y. Yefenof	Sparse regression	MS	ISF	
4.	G. Leshem	Boosting and transportation	PhD	ISF	2008
5.	Y. Kaufman		PhD	?	2008
6.	A. Zakai	Locality in non-parametric Stat. and ML	PhD	ISF, Rector award	2008
7.	Y. Goldberg	Manifold detection	PhD	ISF, President award	2009(?)

Ritov, Ya'acov					
8.	D. Gill	Beauty and shape detection	PhD	ISF, ?	2009(?)
9.	T. Trigano	Shift detection	Post doc	LD, ISF, French Gov.	2008

Yakir, Benjamin					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Ben Arie, Chani	Congenic mapping	M.A	----	2004
2.	Leavitt, Shmuel	Statistics of gene mapping	M.A.	----	2008
3.	Bell, Michael	Detecting changes in images	M.A	----	
4.	Inbar, Esther	Methods for genotyping	PhD	ISF, MOST	2005
5.	Cohen, Noam	Mean-zero Cusum	PhD	BSF	2005
6.	Nardi, Yuval	Smooth fields	PhD	BSF	2006
7.	Brunschwig, Hadassa	Detecting IBD	PhD	BSF	
8.	Leavitt, Shmuel	Statistics of gene mapping	PhD	BSF	

Zucker, David					
	Name Last, First	**Project Title**	**Towards** M.A / PhD / Post-doc	**Source of Funding**	**Year of Graduation**
1.	Agami, Sarit	Cox Survival Regression With Changepoints	MA	NCI / Harvard	2008
2.	Gubman, Yury	Longitudinal vs. Survival Analysis for Repeated Measures Data	MA	N/A	2004
3.	Sharon, Nir	Methods for Misclassified Risk Factors	MA	NCI / Harvard	2009 (expected)

4.	Agami, Sarit	Cox Survival Regression With Changepoints and Lag Effects in the Presence of Covariate Error	PhD	NCI / Harvard	current student
5.	Gubman, Yury	Cox Survival Regression With Covariate Error – Replicate Measures	PhD	NCI / Harvard	2004
6.	Rosen, Laura	A Field Trial of a Handwashing Intervention in Jerusalem Kindergartens	PhD	Israeli Ministry of Education	current student
7.	Vider, Julia	ROC Analysis With Partial Data on True Disease Status	PhD	BSF	current student

6.5 Awards and Honors (Last 5 Years)

Chigansky,Pavel	
Year	**Description**
2001	The Irving Weiss Educational Scholarship
2003,4	Paper award from the Yitzhak and Chaya Weinstein Research Institute for Signal Processing, Tel Aviv University
2005	Support for participation in 30th Conference on Stochastic Processes and Applications, USA
2006-7	French government postdoctoral scholarship

Gal, Elidan	
Year	**Description**
2001	Best Paper Award, Intelligent Systems in Molecular Biology
2002	Intel-Dean Doctoral Prize
2001-2004	Horowitz Fellowship for Outstanding Ph.D. student
2004	Runner-up for best paper award, Uncertainty in Artificial Intelligence

Haviv, Moshe	
Year	**Description**
1984-1987	Alon Fund Scholarship, Department of Statistics, The Hebrew University of Jerusalem, Jerusalem, Israel
1983-1984	Lady Davis Post-Doctoral Fellowship, Department of Statistics, The Hebrew University of Jerusalem, Jerusalem, Israel
1980-1981	Tel Aviv University Fellowship for studies in the USA

Kella, Offer	
Year	**Description**
2007	Vigevani Chair in Statistics
2005	Stieltjes Visiting Professor, The Thomas Stieltjes Institute for Mathematics
1992	Alon fellowship

Mandel, Micha	
Year	**Description**
2007	Alon Fellowship

Motro, Uzi		
Name Last, First	**Year**	**Description**
Motro, Uzi	2005	An award of excellence from the Division of Identification and Forensic Science of the Israeli Police (December 2005).
Perelberg, Amir	2006	Lady Davis Post-Doctoral Fellowship
Perelberg, Amir	2007	Post Doctoral Fellowship in Memory of Mrs. Leah M. Smith

Oman, Samuel D.		
Name Last, First	**Year**	**Description**
Landsman, Victoria	2001	Israeli Statistical Association: Eric Peritz Prize for excellent M. A. Thesis in Biostatistics

Pfeffermann, Danny		
Name Last, First	**Year**	**Description**
Pfeffermann Danny	1976	United Nations Training Fellowship
Pfeffermann Danny	1978	Post Doctorate Training Fellowship, Hebrew University
Pfeffermann Danny	1984	American Statistical Association / Bureau of Census Research Fellowship (not materialized)
Pfeffermann Danny	1989-90	Statistics Canada Research Fellowship
Pfeffermann Danny	1990	Elected as Fellow, *American Statistical Association*
Pfeffermann Danny	1995	Australian Bureau of Statistics Research Fellowship
Victoria Landsman	2008	American Statistical Association/ Survey Research Methods Student Travel Award

Pollak, Moshe		
Name Last, First	**Year**	**Description**
Fellow, the Institute of Mathematical Statistics	1990?	Fellow
Senior, the American Society for Quality	2000?	
Thomas L. Saaty Prize	1991	Best Paper in 1991 American Journal of Mathematical and Management Sciences
Marcy Bogen Chair	2004	Chair for Academic Excellence
Fellow, The National Institute of Standards and Technology, Gaithersburg	1992	Three-month fellowship
Teaching Excellence, Hebrew University	1980?	Award: $2500 for research

Awards / Honors

Please note awards, honors, fellowships/scholarships, etc. received by the investigator and his/her students

Name Last, First	Year	Description
Rinott, Yosef	1983	Fellow, Institute of Mathematical Statistics
Rinott, Yosef	2004	Research fellowship. ICER, Torino.
Azriel, David	2008	HUJI President's scholarship

Ritov, Ya’acov

Name Last, First	Year	Description
Ya'acov Ritov	1984	Alon Fund
Ya'acov Ritov	2008	The Alexander von Humboldt prize

Zucker, David		
Name Last, First	**Year**	**Description**
Rosen, Laura	2005	Hebrew U School of Public Health Award for Excellent PhD Thesis
Gubman, Yury	2005	Yochi Wax prize, Dept of Statistics, Hebrew U