HELLENIC REPUBLIC
National and Kapodistrian
University of Athens
—— EST. 1837 ——

Inter-Institutional Program of Graduate Studies "Logic"

STUDENT STUDY GUIDE

2024-25[*]

Contents:

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[*] Part of the material in the present study guide was drawn from the Study Guide of the Athens MA in Ancient Philosophy.

Introduction

The Inter-Institutional Program of Graduate Studies "Logic" is a two-year graduate program offering in-depth studies and high-level research training in the science of Logic, as well as its interaction with Mathematics and Philosophy. Established in 2024, the IPGS "Logic" will welcome its first students in the fall of 2024. The Program promotes the study of Logic, covering topics concerning (a) the historical development of Logic, starting from the fundamental logical researches of Aristotle and the Stoics and ending with the ground-breaking works of Frege, Russell, Dedekind, Peano, Hilbert, Gödel, Turing and other leading researchers of the 19th and the 20th century, (b) the understanding of the use and effect of logical concepts and tools for the foundation of Mathematics, in order to highlight their consistency and unity, (c) applications of Logic in Philosophy, especially in relation to central problems in its branches, such as Epistemology and Metaphysics, (d) basic concepts and methods in the main branches of Mathematical Logic, as well as the way they are employed to study and solve problems in Mathematics.

The following pages provide essential information about the structure and content of the courses, as well as about practical issues, in order to help students to successfully complete this program.

Enjoy your new intellectual journey!

The Basics

The Inter-Institutional Program of Graduate Studies "Logic" is the result of a collaboration between three major Greek institutions:

[Department of History and Philosophy of Science](), National and Kapodistrian University of Athens

[Research Centre for Greek Philosophy](), Academy of Athens

[School of Applied Mathematical and Physical Sciences](), National Technical University of Athens.

The three institutions have joined forces to create a highly competitive Program, cooperating in teaching and supervision. Courses will be taught in Athens by professors from Greek universities, as well as by visiting scholars from international institutions. Upon completion of the Program, students will be able to conduct both independent and collaborative research and will be well prepared to undertake doctoral studies. The Program is offered **in-person only** and admits up to 30 students per academic year (up to 10 for each of the specializations offered).

The **Program's duration** is two academic years (24 months – 120 ECTS units): three semesters of courses are followed by a fourth semester, during which students are expected to take one course and prepare and submit their Master's thesis.

The **fees** of the Program amount to 750 € per semester for students from EU countries and 1500 € per semester for students from non-EU countries.

The language of instruction is **English**.

The **accreditation** of the Program by the Hellenic Authority for Higher Education (a member of the European Quality Assurance Register) is planned for 2024.

Appications: Candidates may submit their applications every year **in March**.

Classes: Classes start on the first Monday of October, in accordance with the academic calendar published on the webpage of the Program, [https://en.phs.uoa.gr/studies/graduate_studies/logic/]() (under construction).

Administration & Contact

1. **Committee of the Program of Studies**

The Committee of the Program of Studies (CPS) has a two-year term and consists of eleven (11) members, of whom five (5) come from the Department of History and Philosophy of Science of NKUA and three (3) from each of the other institutions that participate in the operation of the IPGS (a total of six members from the other institutions). The CPS is established by decision of the Senate of NKUA following recommendations of the Assemblies of the competent bodies of the institutions that participate in the operation of the IPGS. Members of the CPS come from DEP members, researchers and Professors Emeriti of the institutions participating in the operation of the IPGS.

2. **Steering Committee**

The Steering Committee (SC), which has a two-year term and is responsible to monitor and coordinate the Program, consists of five (5) members, one (1) of whom is the Director of the IPGS and the remaining four (4) are appointed by the members of the CPS.

The distribution of the members of the SC by cooperating institution is as follows:

- Two (2) DEP members of the Department of History and Philosophy of Science of NKUA
- One (1) researcher of the Research Centre for Greek Philosophy of the Academy of Athens
- One (1) DEP member of the School of Applied Mathematical and Physical Sciences of NTUA.

3. **Director**

The Director has a two-year term, renewable without limitation. The CPS designates one of its members as Director of the IPGS.

The members of the CPS will be appointed, in due course, by the institutions participating in the operation of the IPGS and, subsequently, they will determine the members of the SC and the Director of the Program.

The Secretariat:
IPGS "Logic", Department of History and Philosophy of Science, GR – 15771, NKUA Campus
https://goo.gl/maps/WFQr4KT5kD1zPUNi8

Contact email (for all issues): logic@phs.uoa.gr

Advice and help on practical issues for foreign students: issu@uoa.gr

Structure of the Program

The Program lasts for two academic years. Throughout each of the first three Semesters, students are expected to take three courses (30 ECTS), and during the fourth semester they are expected to take one course and prepare and submit their thesis (20 ECTS).

Courses are taught in Athens, primarily in person. Each course meets once a week, for a 3-hour session, and for a total of 13 weeks.

The Program comprises **five compulsory** courses and **five elective** courses (10 ECTS each), depending on the specialization selected by each student.

Specialization: History and Philosophy of Logic

Compulsory Courses

- L1. Mathematical Logic
- L2. Set Theory
- L4. History of Logic
- L5. Modal Logic
- L7. Philosophy of Logic/Philosophical Logic

Elective Courses

- L3. Computability
- L6. Model Theory
- L8. Philosophy of Mathematics
- L9. Philosophy of Science
- HPL1. Deontic Logic
- HPL2. Topics in History of Ancient Logic
- HPL3. Philosophy of Language
- HPL4. Topics in History of Modern Logic
- HPL5. Topics in Philosophy of Logic/Philosophical Logic
- LFM1. Constructive Mathematics
- LFM2. Advanced Set Theory
- LFM3. Category Theory
- LFM4. Topics in Philosophy of Mathematics
- ML1. Proof Theory
- ML2. Topics in Computability
- ML3. Topics in Logic I
- ML4. Topics in Model Theory
- ML5. Topics in Logic II
- ML6. Topics in Proof Theory
- ML7. Topics in Set Theory

Specialization: Logic and Foundations of Mathematics

Compulsory Courses

- L1. Mathematical Logic
- L2. Set Theory
- L4. History of Logic
- L8. Philosophy of Mathematics
- L9. Philosophy of Science

Elective Courses

- L3. Computability
- L5. Modal Logic

- L6. Model Theory
- L7. Philosophy of Logic/Philosophical Logic
- HPL1. Deontic Logic
- HPL2. Topics in History of Ancient Logic
- HPL3. Philosophy of Language
- HPL4. Topics in History of Modern Logic
- HPL5. Topics in Philosophy of Logic/Philosophical Logic
- LFM1. Constructive Mathematics
- LFM2. Advanced Set Theory
- LFM3. Category Theory
- LFM4. Topics in Philosophy of Mathematics
- ML1. Proof Theory
- ML2. Topics in Computability
- ML3. Topics in Logic I
- ML4. Topics in Model Theory
- ML5. Topics in Logic II
- ML6. Topics in Proof Theory
- ML7. Topics in Set Theory

Specialization: Mathematical Logic

Compulsory Courses

- L1. Mathematical Logic
- L2. Set Theory
- L3. Computability
- L5. Modal Logic
- L6. Model Theory

Elective Courses

- L4. History of Logic
- L7. Philosophy of Logic/Philosophical Logic
- L8. Philosophy of Mathematics
- L9. Philosophy of Science
- HPL1. Deontic Logic
- HPL2. Topics in History of Ancient Logic
- HPL3. Philosophy of Language
- HPL4. Topics in History of Modern Logic
- HPL5. Topics in Philosophy of Logic/Philosophical Logic
- LFM1. Constructive Mathematics
- LFM2. Advanced Set Theory
- LFM3. Category Theory
- LFM4. Topics in Philosophy of Mathematics
- ML1. Proof Theory
- ML2. Topics in Computability
- ML3. Topics in Logic I
- ML4. Topics in Model Theory
- ML5. Topics in Logic II
- ML6. Topics in Proof Theory
- ML7. Topics in Set Theory

Academic Staff

National and Kapodistrian University of Athens

Costas Dimitracopoulos
Katerina Ierodiakonou
Vasso Kindi
Eleni Manolakaki
Chrysostomos Mantzavinos
Michalis Philippou
Stathis Psillos
Yannis Stephanou

Academy of Athens
Dionysis Christias
Thanassis Gkatzaras
Doukas Kapantais

National Technical University of Athens
Alexandros Arvanitakis
Vassilios Gregoriades
Petros Stefaneas

Affiliated Academic Staff

Dimitra Christopoulou (NKUA)
Ali Enayat (University of Göteborg)
Georgios Koletsos (National Technical University of Athens)
Roman Kossak (City University of New York)
Vassilis Paschalis (NKUA)
Costas Poulios (NKUA)
Panayiotis Rouvelas
Rizos Sklinos (University of Crete)
Evangelos Triantafyllou (NKUA)
Garyfallia Vafeiadou (NKUA)

Accreditation

The accreditation of the IGPS "Logic" by the Hellenic Authority for Higher Education (a member of the European Quality Assurance Register) is expected to be accomplished by the end of 2024.

Prospective Students I: Requirements

The IGPS "Logic" accepts graduates from Schools of Science, Economics and Political Sciences, Polytechnic Schools and Schools of Philosophy of Universities in Greece or of recognized cognate institutions abroad, as well as TEI graduates of related subjects.

Applicants are also required to provide a Certificate of English language proficiency at level B2 (or higher). This language certificate is not necessary for native English speakers or those who have already completed studies in an English-language school or university program. In the absence of a certificate, proficiency in English can also be confirmed during the interview.

To be eligible for enrollment in a Master's program in Greece, the applicant's Bachelor degree must have been awarded by a university/college listed on the following website: https://www.doatap.gr/national-registry-of-foreign-recognized-higher-education-institutes/

If the applicant's university, despite being a recognized institute, is not currently on the list, the IGPS "Logic" will request that it be added. However, as this procedure might take some weeks, it is recommended to submit the application as soon as possible to avoid any delays in the enrollment process.

The IGPS "Logic" is committed to creating and maintaining an educational, working, and living environment free from discrimination and harassment. The Program is open to all students, regardless of their national origin, sexual orientation and social status, and the Director responds to all allegations of discrimination and harassment and takes steps to ensure that each is handled according to applicable policies and legal requirements.

Prospective Students II: Application

The IGPS "Logic" admits up to 30 students per academic year (up to 10 for each of the specializations offered). Applications may be submitted at any time in March. The application period can by extended by decision of the CPS.

Required application documents (to be submitted by email as a single PDF-file):
- Application form
- Curriculum vitae
- Photocopy of identity card or passport (both sides)
- Copy of degree (or confirmation of completion of studies)
- Transcript of records for undergraduate courses
- Further university degrees and relevant transcripts of records
- For non-native speakers: Certificate of English language proficiency (level B2 or higher)
- Recommendation letters (at least two)
- Scientific publications, if any
- Proof of professional or research activity, if any
- Certificate of recognition of foreign academic qualification.

All documents must be submitted in English or Modern Greek.

Prospective Students III: Selection

Selection is based on the following criteria:
a. Undergraduate degree mark (weight 20%)
b. Relevance of the candidate's University degree and knowledge to the subject of the IPGS (weight 20%).
c. Recommendation letters (weight 20%).
d. Relevant research or professional activity (weight 20%).
e. Oral interview with the Steering Committee (weight 20%).
In the event of a tie, candidates with the same ranking will be selected, in a percentage not exceeding 10% of the maximum number of admissions.

Towards enrollment

After receiving the Letter of Acceptance, prospective students are advised to promptly undertake the following steps.

1. Visa: Students who are not citizens of the European Union, Iceland, Norway, Switzerland, or Lichtenstein must apply **immediately after acceptance** for a Visa D 1.1 at the Greek consulate in their country of residence.

> Obtaining a visa at a Greek consulate can be a lengthy and potentially challenging process; some of you might prefer to utilize the services of https://www.gvcworld.eu/page/about-global-visa-center-world-gvcw, which supports countries such as UK, China, or Russia.

2. Degree validation: Degrees issued by foreign universities should be officially Apostilled/ Certified. The authenticity of degrees from foreign institutions can be verified through one of the following methods:

> a. APOSTILLE stamp for countries that have ratified the Hague Convention;
>
> b. certification from the local Greek Consular Authorities for countries not part of the Hague Convention;
>
> c. verification via a link that allows confirmation of the authenticity of the title by the issuing authority;
>
> d. electronic confirmation of authenticity using a QR CODE issued by the degree-awarding institution.

3. Health Insurance: If you are not an EU citizen, you will need health insurance (if you need a visa, you must present the health insurance at the Consulate); prices start from only €60 per year. EU citizens should obtain and present a European Health Insurance Card.

4. Registration Form: You will find it on the website of the Program.

5. Fees: Successful applicants should pay the tuition fee for their first semester of study (€ 750) before the end of August and promptly provide proof of payment to the Secretariat. In case of non-payment of the first installment or non-enrollment of one or more successful applicants, their place will be offered to those next in line. Tuition fees for each additional semester of study (€ 750) should be paid one month before the start of each semester.

To initiate the enrollment process, please submit copies of items 1-4 to the Secretariat until September 15 (item 5 should have been submitted before the end of August). The enrollment procedure will be concluded in September, with guidance from the Secretariat.

Getting Ready

Successful candidates are advised to thoroughly review the [NKUA Concise Guide for international students](#) and follow the procedures described there. Several key points merit particular attention:

1. Housing: Determine your preferred neighborhood(s) in the city of Athens for residence and establish contact with a reputable agent.
2. If you opt not to secure accommodation remotely, arrange for temporary lodging for your initial days in Athens.
3. Plan to arrive in Athens at least one week before classes start.
4. Attend the teleconference meeting scheduled around September 30th. During this meeting, you will receive guidance on how to apply for your new email address (@uoa) and access to the university's electronic services. To complete this process, you will need your 13-digit Registration Number. After the meeting, kindly sign the application and send it to the Secretariat. Your access will be granted within one to two days. If you miss the meeting, you will have to apply by yourself here (please note that the page is currently available only in Greek): https://webadm.uoa.gr/katsika/users/src/index.php.

Upon Arrival in Athens

Students should once more carefully study the [NKUA Concise Guide for international students](#) and follow the procedures described there. The most important things to do after arriving in Athens are as follows:

1. Come to the informal meeting with the Steering Committee of the Program.
2. Apply here for your student ID: https://academicid.minedu.gov.gr/.
3. Register at https://eclass.uoa.gr/index.php?localize=en and enroll in the classes.
4. Visit the Secretariat of the Program and complete your enrollment; bring with you a certified copy of your undergraduate degree and your passport.
5. Find permanent accommodation.
6. Buy a SIM-card.
7. Obtain a Tax Identification Number (ΑΦΜ), if necessary.
8. Obtain a residence permit, if necessary. Postgraduate students from outside the EU who are holders of a D1.1 Visa with an annual duration need to apply for a residence permit **only** if they want to work alongside their studies in Greece.
9. Open a bank account if you wish to do so.

Academic Calendar

Courses start on the first Monday of every October. Students are expected to arrive in Athens at least one week before classes start.

Academic year 2024-25

	Winter Semester	**Spring Semester**
Expected arrival of students	30 September	
Classes start	7 October	17 February
Public Holidays or no classes	28 October (National Holiday)	3 March (Clean Monday) 25 March (National Holiday) 1 May (Labour Day)
Christmas/Easter break	23 December – 7 January	14-27 April
Classes end	17 January	30 May
Submission of Essays or Exams Week	3-7 February	9-13 June

Academic Advisor

During the first week of the winter semester, and in consultation with the members of the academic staff, the Director appoints an Academic Advisor for each student. The Academic Advisor meets individually with each student at least once per semester (in person or remotely), providing advice and support on matters related to study, courses, academic options, and prospects. The Academic Advisor is responsible for monitoring the student's progress throughout their studies.

Courses

Courses are taught in Athens, primarily in person. Each course meets once a week, for a 3-hour session, and for a total of 13 weeks.
For the courses offered and detailed syllabi for them, please visit the website of the Program:
https://en.phs.uoa.gr/studies/graduate_studies/logic/ (under construction).

Provisional course schedule for the academic year 2024-25

Winter Semester:

L1. Mathematical Logic **(**Dimitracopoulos, cdimitr@phs.uoa.gr)
L2. Set Theory (Rouvelas, prouve@gmail.com)
L4. History of Logic (Kapantais, dkapa@academyofathens.gr)
L7. Philosophy of Logic/Philosophical Logic (Stephanou, ystephan@phs.uoa.gr)
L9. Philosophy of Science (Mantzavinos, cmantzavinos@phs.uoa.gr)
HPL2. Topics in History of Ancient and Medieval Logic (Gkatzaras, athgkatzaras@gmail.com)

Spring Semester (a selection of the following courses will be taught):

L3. Computability (Dimitracopoulos/Paschalis, cdimitr@phs.uoa.gr)
L5. Modal Logic (Stephanou, ystephan@phs.uoa.gr)
L8. Philosophy of Mathematics (Christopoulou, christopdem@math.uoa.gr)
HPL3. Philosophy of Language (Manolakaki, manolaka@phs.uoa.gr)
HPL4. Topics in History of Modern Logic (Kapantais/Triantafyllou, dkapa@academyofathens.gr)
HPL5. Topics in Philosophy of Logic/Philosophical Logic (Philippou, mfilippou.filippou@gmail.com)
LFM1. Constructive Mathematics (Vafeiadou, gvf@math.uoa.gr)
LFM2. Advanced Set Theory (Dimitracopoulos, cdimitr@phs.uoa.gr)
ML1. Proof Theory (Koletsos, koletsos@math.ntua.gr)
ML5. Topics in Logic II (Stefaneas, petrosstefaneas@gmail.com)

The evaluation takes place as described in the syllabus of each course. Grading is done on a scale of 1-10. Grades under 5 amount to a failure, and the student has to retake the course.
At the end of each semester, after the completion of the courses, postgraduate students carry out evaluations of each course and each instructor.

Further Resources

Libraries:

All enrolled students have access to all NKUA libraries, including the [Library of the School of Science](#) and the [School of Philosophy Library](#).
Access to the Catalogue of all NKUA libraries is available at
https://www-en.lib.uoa.gr/services/opac-catalog.html

Courses in Ancient and Modern Greek:

[Foreign Language Teaching Centre ('Didaskaleio')](#)
[Nederlands Instituut Athene and Taalhuis Amsterdam](#)
https://elearninguoa.org/course/arts-culture-greek-language/classical-greek-level

E-Class:

All enrolled students will have access to the eClass platform, which is an integrated e-Learning Management System for University of Athens students and instructors:
https://eclass.uoa.gr/index.php?localize=en

Parallel scientific engagement:

Athens is a vibrant city. Conferences, series of talks, informal reading groups etc. are organized by several university departments or groups. The IPGS "Logic" organizes the "Logic Seminar", a forum for scientific research and exchange on all topics and aspects of Logic. Talks will take place twice each month during the academic year. The duration of each talk will be about 45 minutes, followed by a discussion. The exact program for the academic year 2024-2025 will be announced in September 2024.

The Master's Thesis

In consultation with the Director of the Program, each student submits an application for the preparation of his/her thesis in February of their second year of studies. The application includes the following: proposed title, supervisor's name, and a summary of the proposed thesis.

Next, the Steering Committee appoints the supervisor and the other two members of the examination committee for each thesis. The maximum number of theses that a professor can supervise is set at three (3) per year.

The thesis must be original, and possess a research-oriented character. The title of a thesis can be changed upon the student's request and with the consent of the supervisor.

Writing Guidelines: The thesis should have a length of 15,000 words. This word count does not include the bibliography and possible appendices. The main text must be written in a font of the student's choice, size 11 or 12″, with 1.5 spacing and full alignment. Footnotes should be in size 10″ and single-spaced.

In order for a thesis to be approved, the student must defend it before the examination committee. The work is graded by the committee members immediately after its defense.

Plagiarism: Zero tolerance

When writing scientific papers in the context of individual courses, as well as the Thesis, the student is obliged to respect the copyright of the authors of the sources used and strictly adhere to the current academic rules to avoid plagiarism. Plagiarism is considered serious academic misconduct.

Plagiarism is: (a) The verbatim copying of text from any written source (published or unpublished) without placing the text in quotation marks and/or without properly citing the source from which it is taken. (b) The transfer of a text with minimal phrasal changes and without making proper reference to the source from which it is taken. (c) Quoting any material, even from already published studies of the author himself, without a relevant reference.

In the event that significant plagiarism is found, the work in which it has been committed will be graded "zero" (0).

Graduation

Graduation takes place in November, in the presence of members of the Steering Committee, the Director of the Program, the Chairperson of the Department of History and Philosophy of Science, the Dean of the School of Science and, possibly, a representative of the Rector of NKUA.

The text of the assurance given by the graduates is as follows:

«Τοῦ Μεταπτυχιακοῦ Τίτλου Σπουδῶν περὶ τὴν Λογικὴν τοῦ Τμήματος Ἱστορίας καὶ Φιλοσοφίας τῆς Ἐπιστήμης τοῦ Ἐθνικοῦ καὶ Καποδιστριακοῦ Πανεπιστημίου Ἀθηνῶν, τοῦ Κέντρου Ἐρεύνης τῆς Ἑλληνικῆς Φιλοσοφίας τῆς Ἀκαδημίας Ἀθηνῶν καὶ τῆς Σχολῆς Ἐφαρμοσμένων Μαθηματικῶν καὶ Φυσικῶν Ἐπιστημῶν τοῦ Ἐθνικοῦ Μετσοβίου Πολυτεχνείου ἀξιωθέντες, παρέχομεν κατὰ τὴν ἡμετέραν συνείδησιν πρὸ τοῦ Πρυτάνεως καὶ τοῦ Διευθυντοῦ τοῦ Μεταπτυχιακοῦ Προγράμματος διαβεβαίωσιν τήνδε. Τῆς μέν ἐπιστήμης ὡς οἷόν τε μάλιστα ἐν τῷ βίῳ ἐπιμελήσεσθαι κἀπί το τελειότερον αὐτὴν προαγαγεῖν πειράσεσθαι, πᾶν δὲ ποιήσειν προθύμως ὅ,τι ἂν μέλλη ἐς εὐσέβειαν οἴσειν καὶ κόσμον ἠθῶν καὶ σεμνότητα τρόπων, μηδ' ἐθελήσειν τἀναντία ὧν αὐτοί γιγνώσκομεν διδάσκειν μηδέ καπηλεύειν τήν ἐπιστήμην.»

Graduates who have successfully completed the IPGS "Logic" but cannot participate in the Graduation in person will be able to attend and participate online.

Awards of Excellence

Each year, the IPGS awards excellence prizes to the three best students upon the completion of the 1st and 2nd academic semesters, on the basis of a recommendation of the SC and a decision of the CPS. Prizes have no financial benefit. Prizes are signed by the Director of the IPGS and the Chair of the Department of History and Philosophy of Science.

Conditions:
1. Average grade for 1st and 2nd semester courses greater than or equal to eight.
2. Successful completion of courses in February (1st semester) and June (2nd semester) in the normal study years of each series of students.

Procedure:
After the submission of the June grades, the SC considers the grades of each series of students and, provided that the above conditions are met, ranks the students in descending order (in terms of their grade point average) and submits a recommendation to the CPS regarding the award of prizes to the three (3) top students.

Grade Average: In all considerations concerning these awards, the grade average is calculated using the mathematical formula:

$$\text{Grade Average} = \left(\sum_{k=1}^{N} GC_k \cdot CU_k\right) / TCU$$

where
N = number of courses of the corresponding semesters

GC_k = grade of course k

CU_k = credit units of course k

TCU = total number of credit units of the corresponding semesters.

The Degree:

HELLENIC REPUBLIC

National and Kapodistrian University of Athens
— EST. 1837 —

INTER-INSTITUTIONAL PROGRAM OF GRADUATE STUDIES "LOGIC"

OF THE DEPARTMENT OF HISTORY AND PHILOSOPHY OF SCIENCE (NKUA), THE SCHOOL OF

APPLIED MATHEMATICAL AND PHYSICAL SCIENCES (NATIONAL TECHNICAL UNIVERSITY OF

ATHENS) AND THE RESEARCH CENTER FOR GREEK PHILOSOPHY (ACADEMY OF ATHENS)

MASTER'S DEGREE

……………………………... (**first name/last name/father's name**), having completed the approved course as above and passed the examinations, has been awarded the Degree of Master of Science/Master of Arts (**as the case may be**) in "Logic, Specialization: History and Philosophy of Logic / Logic and Foundations of Mathematics / Mathematical Logic" with the grade of "………………" (**excellent/very good/good**) on…………… (**date**).

In witness whereof this degree is issued,

Athens, 00/00/0000

THE RECTOR   THE CHAIR OF THE DEPARTMENT

THE SECRETARY OF THE DEPARTMENT