



**CONSIGLIO NAZIONALE
DEI GEOLOGI**

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Prot. n.52562 - Interno del 05/08/2014

Tit./Cl. III/5



UNIVERSITY OF MESSINA

**DEPARTMENT OF THE ENVIRONMENT, SECURITY, TERRITORY, FOOD, AND
HEALTH SCIENCES (S.A.S.T.A.S.) “CARMELO ABBATE”**

FIRST LEVEL POSTGRADUATE MASTER CLASS IN FORENSIC GEOLOGY

FIRST EDITION - A.Y. 2014/2015

COMPETITION ANNOUNCEMENT

Art. 1

General information

In the academic year 2014/2015 the University of Messina establishes in the Rectoral Decree n° 2148 - 04 August 2014 (prot. 52371 04 - August 2014) the First Level Postgraduate Master Class in Forensic Geology, from now on called “Master”.

The academic body in charge for administrative and accounting management of the Master is the Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, University of Messina.

WEB site: http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148

WEB site: http://www.unime.it/dipartimenti/sastas/_bandi_e_concorsi

WEB site: http://www.unime.it/unigeolab/_pagine/-15738.html

The University of Messina designates in the Rectoral Decree n° 2150 - 04 August 2014 (prot. 52384 - 04 August 2014) Prof. Roberta Somma (Assistant professor, SSD GEO/02 at the Department of the Environment, Security, Territory, Food, and Health Sciences - S.A.S.T.A.S. “Carmelo Abbate”) Director of the Forensic Geology Master.

The course has the patronage of the Italian National Council of Geologist (CNG), *The International Union of Geological Sciences (IUGS) Initiative on Forensic Geology (IFG)*, and the Municipality of Ali Superiore (Messina).

The master is sponsored by Ambrogeo, Alfatest, and Malyern. Based on above-mentioned (and possible further) sponsors, some scholarships will be provided. The scholarships will be based both on financial incomes (*ISEE*) and merits (see the ranking). Sponsors will unquestionably decide the weight to allocate to the financial income and the merit respectively. The amount will be equal to a part of the admission fee. This amount will be attribute to each winners after the sponsor supplying.

The Master is a specialization, higher educational, cyclical, and long-term course with a final First Level Postgraduate Master degree, after a final exam (Ministry Decree 22/10/2004 n° 270 “Modifiche al regolamento recante norme concernenti l’autonomia didattica degli Atenei” approved by the Decree of the Ministry of University and Scientific and Technological Research 3/11/1999 n° 509). The Master is realized due to the art. 20 of the University Didactic Rules.

The Master is open to graduates with Bachelor Degree belonging to the Italian University classes L-32 Scienze e tecnologie per l'ambiente e la natura (DM 270/04), L-34 Scienze geologiche (DM 270/04), 16 Scienze della Terra (DM 509/1999), 27 Scienze e tecnologie per l'ambiente e la natura (D.M. 509/1999); Second Degree level courses belonging to the Italian University classes LM-60 Scienze della natura (DM 270/04), LM-74 Scienze e tecnologie geologiche (DM 270/04), LM-75 Scienze e tecnologie per l'ambiente e il territorio (DM 270/04), LM-79 Scienze geofisiche (DM 270/04), 68/S Scienze della natura (DM 509/1999), 82/S Scienze e tecnologie per l'ambiente e il territorio (DM 509/1999), 85/S Scienze geofisiche (DM 509/1999), 86/S Scienze geologiche (DM 509/1999); University Degree in Geological Sciences and Natural Sciences (old regulations); equivalent University Degree issued in foreign countries, accepted by the Board due to current legislation.

The Masters course is also open to graduates of other states of the European Union and non-European countries (in this case, they must be in possession of a valid residence permit or national long-stay visa for study purposes, to be attached to the application form).

The course aims to provide the delegates with training in Forensic Geology and a basic knowledge in the legal field and a focus on technical and scientific matters, to deal with professional reports and consultations, as ex officio technical consultant (C.T.U.) in civil trials, or as expert witness/consultant in criminal trials, having a certified training and education.

The experts in Forensic Geology could provide assistance to, for example judges, magistrates, lawyers, coroners, and law enforcement officers and police in criminal and/or civil lawsuits, with existing and innovative methods and techniques in forensic geology and to assist the forensic investigations with the correct analysis, interpretation and reporting of the results.

Due to reform of the Italian Code of Criminal Procedure (Law 7/12/2000 n° 397) which allows to investigate and analyze the forensic evidences also for advocacy and civil actions, the Master experts can also support advocacy investigations.

Forensic Geologists can support the law enforcement agency and police by helping to solve crimes and assisting the investigations using the acquired skills.

The skills can be also applicable and transferable to public administration centers, and in public and private laboratories.

In particular, the Master delegates coming from the law enforcement agency and police (due to competition announcement requirements) will acquire forensic principles applied to geological field with a multidisciplinary approach and the possibility to take advantage from experts and high-tech instruments.

Specific aims

Acquiring knowledge in:

- Elements of civil and criminal procedure, of criminalistics, and of techniques for deposition in the law courts in Italy;
- Legislative language elements and evaluation of probative value of the evidence;
- Elements of criminalistics science since the combination of various techniques is often required for the resolution of criminal cases, and which may be used for the analysis of geological trace evidence on items and objects collected at crime scenes;
- Inspection techniques and evidence collection consisting of a range of traces and knowledge of the procedures of the evidential chain of custody;
- The main analytical techniques used in the field of Geosciences (geophysical, chemical, and physical analysis, chemical and geochemical, mineralogical, sedimentological, environmental, etc.).

Experts in Forensic Geology will be able to act correctly at the crime scene, and to conduct investigations with high-tech tools provided by science and technology.

Thanks to the Master, Forensic Geology experts will be able to:

- Apply the knowledge acquired in offense involving crimes against an individual, ground of people property and the environment;
- Collect and interpret the geological trace evidence found at crime scene;
- Lead a crime scene examination including the provision of a photographic documentation;
- Collate and manage geological trace evidence in accordance with approved methods and techniques and chain of custody;
- Determine the most appropriate analytical procedures and the techniques according to the type and volume of sample available;
- Become familiar with the various analytical techniques including for example mass spectrometry ICP-MS, ICP-OES, atomic fluorescence, gamma spectrometer, FT-IR/RAMAN spectrometer, petrographic microscope, stereo-microscope, laser diffraction particle size, 3-D sieve, Ground Penetrating Radar (GPR), metal detectors, seismic surveys, X-ray diffractometer, SEM, etc.;
- Understand the basic requirements for search, and how to design a ground search for burials, including the choice of search assets, such as geophysical surveys and the use of sniffer dogs;
- Comprehend the applications of microscopy for crime scene investigations;
- Collaborate and communicate successfully and with synergy with other forensic science experts;
- Operate in order to identify correctly geological traces and their probative value in an investigative context and at the crime scene.

The Master experts will also support the legal authorities or private and public entities as consultants.

In particular:

- JUSTICE FIELD (CRIMINAL)

Judge Technical Consultant, after registration to the Technical Experts of the law court, Technical Consultant of the Public Prosecutor, Defense Technical Consultant, Auxiliary of the Judicial Police.

- JUSTICE FIELD (CIVIL)

Judge Technical Consultant (CTU), Technical Advisor of the Defenders of the Parties (Actor-Defendant, Appellant-Respondent) (CTP).

- PUBLIC ADMINISTRATION

- PUBLIC AND PRIVATE ANALYSIS LABORATORIES

Educational Organization

During the academic year, the Masters educational organization includes a rotation of didactic, study, and research training. The classes will be always related to forensics. An internship will be in the various laboratories of the SASTAS Department with numerous high-tech instruments. There will be a balanced integration between theory and practice (with lab tests and on-site tests), and the high technology will support the classes in order to monitor systematically the education process.

The Master includes both didactic and practical professional training: lectures, workshops, laboratory, exercise activities, evidence sampling simulations, test sites for body and targets search, specific case studies, possible visits to different departments of both the University of Messina and outside, individual study activities, working groups, a period for preparing the final thesis, for studying the single classes, and for the mandatory internship.

The activities (Table A) cover a total time of **1500 hours**, equivalent to **60 credits** (AFC) (Article 5 of the DM 509/99).

The Master is organized in (Table A):

- No. 6 modules (40 credits) corresponding to 440 hours of teaching (including workshop-laboratories activities and exercises) and to 560 hours of individual study.
- No. 1 internship (8 credits) corresponding to 200 hours of practical training.
- Preparation for the thesis for the final defence (12 credits) corresponding to 300 hours.

The Masters degree course will be divided into the following 6 modules:

Module 1: Law and Criminalistics

This module will be 42 hours of didactics (6 credits), including 3 sub-modules on elements of Civil and Criminal Law and Procedures, criminalistics elements, repeatable and unrepeatable analyses, the role of experts, techniques of inspection and evidence collection (with simulation practice in the field conducted by the Scientific Investigations Bureau).

Module 2: Analysis of the Territory, Research Techniques, and Recovery of Buried Bodies

This module will be 96 hours of didactics (11 credits), including 6 sub-modules about the use of Remote Sensing in cases of environmental crimes, Geomatics in soil conservation policies, principles of geology in the forensic field, the search for buried homicide victims (or other buried targets) geophysical, drones, detector dogs, volatile organic compounds, and the use of insects as a dating tool (Forensic Entomology), and procedures for the evidence collection.

Module 3: Crystalline Solids

The module will be 68 hours of didactics (4 credits), including 4 sub-modules related to the use of analytical techniques such as stereoscopic and microscopic analyses, SEM, X-Ray diffraction of natural, and anthropogenic crystalline materials from forensic evidence.

Module 4: Geology of the Italian Territory with Elements of Structural Geology

The module will be 48 hours of didactics (4 credits), including 3 sub-modules about the definition of the main geological and structural features of the region, such as diagnostic elements to assume the association chain sector, microfossils and their possible origin, and techniques to identify falsified and smuggled geological objects (fossils, minerals, etc.).

Module 5: Forensic Soils.

The module will be 166 hours of didactics (13 credits), including 9 sub-modules about pedology and soil units, the physical, chemical, geochemical (ICP-MS ICP-OES), sedimentological (grain size by sieving and laser diffraction) characteristics of forensic terrains (including soils) and procedures for evidence collection of forensic micro-traces and inorganic forensic traces in the context of high-profile cases.

Module 6: Forensics Applied to Environment and Territory.

The module will be 20 hours of didactics (2 credits), including 2 sub-modules about cases of disputes in forensics related to geomorphological and the environmental.

If there will be motivated needs to reorganized the educational modules, the technical-scientific board might modify the study plan according to the Master Director, to the total amount of credits, and the educational aims.

The educational activities will be taught by highly skilled instructors, experts, and technicians with proven experience and professionalism. Detailed programs of the educational modules will be defined by the Faculty Board. The Faculty and Master lecturers Board, their *curricula*, and detailed educational programs will be advertise on the following websites before starting the Master:

http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148

and/or

WEB site: http://www.unime.it/unigeolab/_pagine/-15738.html

The distribution of the total hours of education (1500 hours) and AFCs is shown in the following Table A.

The lectures will be held in Italian and/or English language (if foreign students will participate), and the course material will be provided in English or Italian.

The final part of the Master will be dedicated to the practical-training internship, and the final thesis preparation. The internship will take place at the Laboratories of Geology (UniGeoLab), Chemistry, and Physics of the SASTAS Department since they have a number of high-tech equipment and qualified technicians.

During the Masters internship, seminar activities will be scheduled. In particular, these will be provided in English by geoscientists belonging to the International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG) (patronage institution) and to the James Hutton Institute of Scotland, and by several experts in the field of forensic geosciences (in Italian or English language). During the course, students will have an interview in English language and will have to pass a communication test. Tests to establish the skills acquired during the educational modules will be organized as continual assessment during the period of the Master.

At the end of the Master exam modules, a thesis defense is expected in according to the approval of the main topic by the Master Director and the instructors. The thesis defense will take place before the end of the academic year and within the period prescribed by the University of Messina. The thesis demand together with the topic indication and the supervisor name must be submitted for its approval at least four months before the defense.

For the final evaluation, the thesis will be defended.

Compulsory attendance is required for each learning module and the internship (including the workshops), with a maximum percentage of absences equal to 20% of the classes. If exceptionally the Master will be active also the academic year after, the student exceeding the above-mentioned percentage of excused absences (due to a medical documentation), he/she can regain the previous absences and attend regularly both module exams and thesis defense (in this case it will be necessary to pay an admission fee as an “out-of-course”).

Lectures, workshops, and internships will be mostly at the SASTAS Department and the Laboratories of Geology (UniGeoLab), Chemistry, and Physics of the Department (University of Messina). Some classes, workshops, and simulations might be in some test sites at the Municipality of Ali Superiore (Messina), if necessary.

The beginning of the Master, save due to force majeure, is presumably on January 2015.

Classes and internships will supposedly be biweekly, each month, between January 2015 and

December 2015 (8 daily hours, morning: 9am-1pm; afternoon: 2-6pm). The calendar will be published before starting the Master on the following website:
http://www.unime.it/unigeolab/_pagine/Master%20Geologia%20Forense-15696.html

Achievement of the Diploma

After the end of the Master, if the enrolled students have finished all the classes, complied all the duties, and passed the final exam (Master defense), the First Level Postgraduate Master Diploma in Forensic Geology will be released.

Art. 2

Admission requirements and procedures

The minimum number of enrolled students to activate the course is 15, whilst the maximum number is 25.

The technical-scientific board can activate the Master also if the number of enrolled students is less than the minimum, according to relevant reasons and financial congruity. Otherwise, it will be postponed.

The possible recipients can be Italians, EU citizens, and overseas citizens (in the latter case, they need regular residence permission, or national long-stay student visa to be attached to the application).

Requirements

The Masters course will be open to graduates in:

- Bachelor Degree belonging to the Italian university classes:
 - ✓ *L-32 Scienze e tecnologie per l'ambiente e la natura (DM 270/04)*,
 - ✓ *L-34 Scienze geologiche (DM 270/04)*,
 - ✓ *16 Scienze della Terra (DM 509/1999)*,
 - ✓ *27 Scienze e tecnologie per l'ambiente e la natura (D.M. 509/1999)*.

- Second Degree level belonging to the Italian university classes:
 - ✓ *LM-60 Scienze della natura (DM 270/04)*,
 - ✓ *LM-74 Scienze e tecnologie geologiche (DM 270/04)*,
 - ✓ *LM-75 Scienze e tecnologie per l'ambiente e il territorio (DM 270/04)*,
 - ✓ *LM-79 Scienze geofisiche (DM 270/04)*
 - ✓ *68/S Scienze della natura (DM 509/1999)*,
 - ✓ *82/S Scienze e tecnologie per l'ambiente e il territorio (DM 509/1999)*,
 - ✓ *85/S Scienze geofisiche (DM 509/1999)*,
 - ✓ *86/S Scienze geologiche (DM 509/1999)*.

- University Degree in Geological Sciences and Natural Sciences (old regulations).

- Equivalent University Degree issued in foreign countries, accepted by the Master Board, in agreement to current legislation. The qualifications need both the official legal translation in Italian language and a certify transcript released by an Italian Representative of the foreign country in which the qualification is obtained. Because it is not allowed under-reserve admission, the requirements must be certified until the deadline of the application.

Incompatibilities

The Master enrollment is incompatible with simultaneous enrollment to other masters, degrees, specialization and PhD schools.

Master selection procedure

If the Master-application number is equal or minor than twenty-five, the Panel of Judges does not proceed with the selection.

If the application numbers are above the maximum number of available places, in order to select the right number of enrolled students, the Panel of Judges (composed by the Master Director and two of the Technical-Scientific Board) ranks the enrolled students based on evaluation points of qualifications.

The students with the higher points will be enrolled according to the maximum number of available places.

Merit ranking

In order to be enrolled in the Master the following merit ranking will be evaluated:

- Degree grade;
- Bachelor/PhD/Master/other postgraduate diploma (thesis), professional/scientific activities;
- PhD/Master/Specialization degree;
- Scientific publications.

In order to compile the merit ranking, the Panel of Judges will attribute a maximum of **100 points**, as described below:

1. Till a maximum of **50 points** due to the Degree:
 - 20 points for a grade <94/110;
 - 30 points for a grade between 95/100 and 100/110 included;
 - 40 points for a grade between 101/110 and 110/110 included;
 - 50 points for a grade of 110/110 cum laude.
2. Till a maximum of **10 points** due to the PhD:
 - 10 points for high relevance to the Master topics;
 - 7 points for medium relevance to the Master topics;
 - 4 points for low relevance to the Master topics;
 - 2 points for no relevance to the Master topic.
3. Till a maximum of **5 points** due to other postgraduate and master:
 - 2 points for high relevance to the Master topic;
 - 1 point each master for medium relevance to the Master topic;
 - 0.5 point each master for low relevance to the Master topic;
 - 1 point each postgraduate for medium relevance to the Master topic;
 - 0.5 point each postgraduate for low relevance to the Master topic;
4. Till a maximum of **5 points** due to Bachelor/Master/PhD/Specialization diploma (thesis):
 - 5 points for high relevance to the Master topics;
 - 4 points for medium relevance to the Master topics;
 - 3 points for low relevance to the Master topics;
5. Till a maximum of **21 points** due to scientific publications:
 - 3 points each publication about the Master topics;
 - 2 points each peer-reviewed publication;
 - 1 point for attending conference.
6. Till a maximum of **9 points** due to working/professional experiences related to the Master topics:
 - 1 point for working year portion < 6 months related to the Master topics;
 - 2 points for each working year related to the Master topics;

- 9 points for each working period more than 3 years related to the Master topics.

In case of renunciation from one or more candidates, the free available positions will be open to other candidates of the final ranking until the available positions are taken due to the merit ranking.

Master enrollment and application

Application

On the application envelope the name, the surname, and the sender address is necessary to be written. Moreover, it necessary to specify: Application for the Forensic Geology Master SASTAS Department University of Messina – Urgent forward.

The application, compiled due the Annex A, duly signed (otherwise the candidate will be excluded), and addressed to the Director of the Master in Forensic Geology, will be:

- handed in (an official protocolled receipt will be released) to the Secretariat of Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, Viale F. Stagno d’Alcontres, 31, 98166 Messina, Italy;

or

- sent by traditional post (express mail, etc.) to the Secretariat of Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, Viale F. Stagno d’Alcontres, 31, 98166 Messina, Italy;

or

- sent via certified electronic mail (CEM, also known as authenticated e-mail or stamped e-mail) from the certified e-mail of the candidate to:

dipartimento.sastas@pec.unime.it

The office will be open from Monday till Friday 8am-2pm and 3pm-5pm. Due to the summer period, the office will be close from 9th till 24th August 2014.

The **application (Annex A) together to the below-mentioned attachments**, otherwise the candidate will be excluded, **must arrive** due to the above-mentioned modalities (handed in, or sent by traditional post with signed return receipt registered letter, or sent by certified e-mail to dipartimento.sastas@pec.unime.it) **no later than 6nd October 2014 at 12pm**.

Fax or not-certified email applications are not permitted.

It will not possible to accept applications after this deadline, and, using traditional post, the date stamp of the accepting post office will not be considered a date-proof, but only the date of the application receipt at the Department will be considered.

The Administration has no responsibilities for communication disseminations due to incorrect address indications from the candidate, or for late or no communication of address changes on the application, nor possible postal problem due to third parts, fortuitous or majeure force happenings. University Administration can exclude in anytime candidates with incomplete or not correct qualifications/applications.

In the application the candidate must declare, using auto-certification under own responsibilities, and conscious of penal responsibilities for falsity and mendacious declarations (art. 76, DPR 28 December 2000, n° 445):

- a) Personal details, date and place of birth, residence address, and the chosen address (specifying the zip code, and, if possible, the landline telephone number, and the email); for the EU and overseas citizens it is necessary an Italian address or the residence address at the Italian Embassy;
- b) Personal citizenship;
- c) Statement of clear criminal record; otherwise, a list of criminal convictions;
- d) The type, the date, the grade, and the University of the degree, or an equivalent qualification in a foreign Institution (foreign qualifications need both the official legal translation in Italian

language and a certify transcript released by an Italian Representative of the foreign country in which the qualification is obtained – see article 2);

- e) To attend the Master fulfilling the financial fees;
- f) To communicate soon enough every single address changes;
- g) To be not enrolled in any other degree, specialization, PhD, or other postgraduate courses, otherwise, to immediately suspend it;
- h) The personal fiscal code;
- i) To be aware of every single articles of the Master announcement.

To be attached to the application:

- 1) A double-sided printing copy of a personal valid and signed identity document;
- 2) A fiscal code copy;
- 3) Residence permission or national long-stay student visa, only for overseas countries;
- 4) *Curriculum vitae et studiorum* based on the EU format;
- 5) Motivation letter (or presentation letter of a professor of the university);
- 6) Degree documentation from an official legal translation in Italian language and a certify transcript released by an Italian Representative of the foreign country in which the qualification is obtained – see article 2 (only if the candidate has a non-Italian qualification degree);
- 7) Bachelor/PhD/Master/Specialization/other postgraduate diploma (thesis), professional/scientific activities;
- 8) PhD/Master/Specialization degree;
- 9) Scientific publications;
- 10) Financial income related to the previous fiscal year (only if the candidate wants to participate for the scholarship);
- 11) List of all the qualifications in the application.

It is worth to notice that on each publications it is necessary to write the candidate surname and first name; moreover, if there are more authors, the candidate surname must be highlighted.

Furthermore, the publications must be certified (otherwise the candidate will be excluded), according to one of these procedures below:

- Authentic copy;
- Photocopy, including self-declaration in substitution of attested affidavit to testify conformity to the originals, due to the articles 19 and 47 of the DPR 28 December 2000 n° 445 and further modifications and integrations. The candidate declaration must be signed and handed in together to a duly signed copy of ID card or passport.

The Administration can check in anytime the truth of the candidate self-declarations in substitution of attested affidavit, due to the above laws. According to this, the candidate must submit every single detail to the Administration in order to check the truthfulness. In case of incomplete information, the Panel of Judges can ask to the candidate and/or the Administration for further integrations and/or clarifications in order to accept the self-declared qualifications. Note that in case of mendacious declaration the candidate, further than being excluded from the selection procedure, will be denounced according to the Criminal Code and the special laws regarding the matter.

Is it possible to download the application (Annex A) on the University website using the following link:

http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148

The Master fees, including the insurance, are € **3000.00** (three thousand Euros), divided in these installments:

- first installment of € 1000.00 (enrollment), **no later than 10 days after the publication of the enrolled ranking**,
- second installment of € 1000.00, no later than 28st February 2015,
- third installment of € 1000.00, no later than 31st July 2015.

The receipt of the second and third installment must be hand in to the SASTAS Department no later than seven days after the payment.

The refund is not allowed in case of withdrawal.

The first installment can be refunded if the Master is not activate.

Enrolled students and Registration

The result of the enrollment process (enrolled student announcement) will be notified only with an announcement on the following website:

http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148

For this reason, no personal communication will be delivered.

The accepted students, in order to be enrolled to the Master, **no later than 10 days after the ranking publication**, must hand in to the Secretariat of Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, Viale F. Stagno d’Alcontres, 31, 98166 Messina, Italy:

- Degree documentation (Diploma),
- Two passport photos,
- The receipt of the first installment (enrollment fee of € 1000.00), with the deposit on the bank account: Unicredit Banca - IBAN: IT 10 C 02008 16511 000102371624. BIC/SWIFT: BSICITRRMES, to Dipartimento di Scienze dell’Ambiente, della Sicurezza, del Territorio, degli Alimenti e della Salute (S.A.S.T.A.S.) “Carmelo Abbate” dell’Università degli Studi di Messina, ITALY. Reason: **Inscription Fee, Forensic Geology Master Messina University**. On the transfer, must be indicated: **First Name, Surname, and fiscal code number of the candidate**.

The unsuccessful fulfillment of the above requirements will be considered as a renounce to the Master enrollment, and therefore the available places will be reassigned due to the official ranking.

The inscription documentation, addressed to the Forensic Geology Master Director will be:

- handed in (an official protocolled receipt will be released) to the Secretariat of Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, Viale F. Stagno d’Alcontres, 31, 98166 Messina, Italy;

or

- sent by traditional post (express mail, etc.) to the Secretariat of Department of the Environment, Security, Territory, Food, and Health Sciences (S.A.S.T.A.S.) “Carmelo Abbate”, Viale F. Stagno d’Alcontres, 31, 98166 Messina, Italy. In this latter case, ensure the correct postage, otherwise it shall be invalid;

or

- sent via certified electronic mail (CEM, also known as authenticated e-mail or stamped e-mail) from the certified e-mail of the candidate to:

dipartimento.sastas@pec.unime.it

The office will be open from Monday till Friday 8am-2pm and 3pm-5pm.

The **inscription documentation** (handed in, or sent by traditional post with signed return receipt registered letter, or sent by certified e-mail to dipartimento.sastas@pec.unime.it) **must arrive no later than 10 days after the ranking publication**.

Fax or not-certified email applications are not permitted.

It will not possible to accept applications after this deadline, and, using traditional post, the date stamp of the accepting post office will not be considered a date-proof, but only the date of the application receipt at the Department will be considered.

Using traditional post, therefore shall be considered proof the date stamp of the accepting post office according to the D.P.R. 28th December 1970, no. 1077.

The Administration has no responsibilities for communication disseminations due to incorrect address indications from the candidate, or for late or no communication of address changes on the application, nor possible postal problem due to third parts, fortuitous or majeure force happenings. University Administration can exclude in anytime candidates with incomplete or not correct qualifications/applications.

Ranking scroll

Due to renouncements or incomplete application, the available positions will be open for the adequate candidates of the ranking with the same deadline highlighted before.

The Master Office will post, firstly, on the following website

http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148

then with other posts every three days, both the number of available positions and the name of the ranked candidates, according to the application modalities in the article 2.

The adequate candidates due to the above-mentioned ranking scroll must hand in the same application, using the same deadline highlighted in the previous articles.

After this deadline, the adequate candidates without a proper application will be considered as renouncements.

Note that each post related to the ranking scroll, to the applications, to the deadlines, is equal to an official notification, because no personal communications will be delivered.

Further Information:

- *Master and High education delegate*

Prof. Santi Fedele
fedeles@unime.it

- *Master office*

master@unime.it
Dr. Giuseppe Furnari (Capo Settore)
Tel.: 0039/090/6768263
furnari@unime.it
Dr. Alberto Tomasello
Tel.: 0039/090/6768263
atomasello@unime.it

- *Siti consultabili*

http://www.unime.it/ateneo/_bandi_e_concorsi_Studenti?catid=148
http://www.unime.it/dipartimenti/sastas/_bandi_e_concorsi
http://www.unime.it/unigeolab/_pagine/Master%20Geologia%20Forense-15696.html

- *Direttore Master*

Prof. Roberta Somma
Dipartimento di Scienze dell’Ambiente, della Sicurezza, del Territorio, degli Alimenti e della Salute (S.A.S.T.A.S.) “Carmelo Abbate” – Università degli Studi di Messina. Tel.: 0039/339/3652672. Email: rsomma@unime.it – Indirizzo Skype: roberta.somma.university

Personal and sensitive information will be used based on the D. Lgs. 196 del 30/06/2003

Messina, 05/08/14

DIRECTOR
OF THE FORENSIC GEOLOGY MASTER

(Prof. Roberta Somma)

DIRECTOR
OF THE SASTAS DEPARTMENT

(Prof. Giacomo Dugo)

STUDY PLAN

Table A – Outline of the classes

MODULE 1 LAW AND CRIMINALISTICS (6 AFC)			
Lecture	AFC	Lecture hours	Individual study hours
Fundamentals of Civil Code and Code of Civil Procedure	2	10	40
Fundamentals of Penal Code and Code of Criminal Procedure	2	22	28
Fundamentals of criminalistic, techniques of judicial site survey and collection of the evidence	2	10	40
MODULE 2 ANALYSIS OF THE TERRITORY, TECHNIQUES OF SEARCH AND RECOVERY OF BURIED (11 AFC)			
Technical-geological survey in the environmental crimes	2	14	36
The use of the geomatics in the protection of territory	2	14	36
Forensic applied geology with exercise in test-sites	2	20	30
Research of buried targets and recovery of human remains*	2	26	24
The contribution of the forensic entomology to the criminal investigation	2	16	34
Techniques of search with sniffer dogs	1	6	19
MODULE 3 CRYSTALLINE MATERIALS (4 AFC)			
Laboratory of optical microscopy on thin sections (coherent and incoherent rocks and anthropogenic materials) with exercise*	1	10	15
Optical stereomicroscopy laboratory with exercise*	1	20	5
X-Ray Diffraction (XRD) laboratory with exercise*	1	18	7
SEM laboratory with exercises on forensic materials	1	20	5

MODULE 4			
GEOLOGY OF ITALIAN TERRITORY WITH ELEMENT OF STRUCTURAL GEOLOGY (4 AFC)			
The contribution of Territorial geology to forensic geoscience*	1	22	3
Stratigraphic, biostratigraphic and tectonic features of the Mesozoic-Cenozoic successions with laboratory and exercises*	2	20	30
Methods of falsification in Geosciences*	1	6	19
MODULE 5			
FORENSIC SOILS (13 AFC)			
Principles of Geopedology and analysis of forensic soils with laboratory and simulation in the field for a proper evidence collection*	2	26	24
Forensic soil analysis with laboratory for particle size by sieving, sedimentation, and by laser diffraction, with exercises*	1	18	7
Forensic soil analysis with laboratory for stereomicroscopy, with exercises*	1	14	11
Forensic palynology and forensic botany	2	10	40
Chemistry of contaminated soil in laboratory	1	10	15
Geochemistry of contaminated soil with mass spectrometry laboratory (ICP-MS e ICP-OES) and atomic fluorescence	3	60	15
Physics of contaminated soil	1	8	17
Physics of forensic soil in laboratory	1	12	13
FT-IR/RAMAN spectroscopy of soil, geological and anthropogenic materials, with exercises	1	8	17
MODULE 6			
APPLICATIONS TO THE ENVIRONMENT AND TERRITORY (2 AFC)			
Problem in Forensic geomorphology	1	8	17
Environmental crimes*	1	12	13
TOTAL OF LECTURE HOURS	40	440	560

*Lecture held in English language (if foreign students will participate)

INTERNSHIP				
	Facilities	Specific educational aims	Hours	AFC
	SASTAS Laboratories	<ul style="list-style-type: none"> - ICP-MS, ICP-OES mass spectrometry, - FTIR-RAMAN spectrometry, - laser diffraction granulometry, - mechanical sieving and sedimentation, - X-ray diffraction, - SEM-EDX diffraction, - microscope analyses, - stereomicroscope analyses, - other techniques will be provided during the workshops. 	200	8

MASTER TOTAL				
		hours	AFC	hours
TOTAL OF CLASSES		440		
TOTAL OF AFC			40	
TOTAL OF INDIVIDUAL STUDY				560
TOTAL OF INTERNSHIP (AND WORKSHOPS)			8	200
TOTAL OF PREPARATION AND DEFENSE THESIS			12	300
TOTAL			60	1500
Total number of hours (classes + internship)				640
Tolerated Absences (no more than 20%)				128

Annex A

**APPLICATION EXAMPLE TO THE
FIRST LEVEL POSTGRADUATE MASTER CLASS IN
FORENSIC GEOLOGY**

To Prof. Roberta Somma
Director of the Master
in Forensic Geology
Department of the Environment, Security, Territory,
Food, and Health Sciences (S.A.S.T.A.S.)
“Carmelo Abbate”
University of Messina
Viale F. Stagno d’Alcontres, 31
98166 Messina
ITALY

The undersigned (surname, name)

Born in (county/country) on

Living in.....(county/country) Street.....
.....n°.....Zip Code.....

Fiscal Code

Gender F M

Domicile (if it differs from the residence above):
city..... (county/country) Street.....
.....n°.....Zip Code.....

Landline number:Mobile number:; E-mail:.....

INQUIRE

to be enrolled to the First Level Postgraduate Master Class in Forensic Geology.

Under own responsibility, it is declaring:

- a) to becitizen;
- b) to have a clear criminal record; otherwise, I am listing criminal convictions;
- c) to have a degree in at the University of, taken
in with a grade of
- d) to communicate soon enough every single address changes;
- e) to attend the Master fulfilling the financial fees;
- f) to be not enrolled in any other degree, specialization, PhD, or other postgraduate courses;
otherwise, to immediately suspend it;
- g) to be aware of every single articles of the Master announcement.

ATTACHMENTS:

- 1) A double-sided printing copy of a personal valid and signed identity document;
- 2) A fiscal code copy;
- 3) Residence permission or national long-stay student visa, only for overseas countries;
- 4) *Curriculum vitae et studiorum* based on the EU format;
- 5) Motivation letter (or presentation letter of a professor of the university);
- 6) Degree documentation from an official legal translation in Italian language and a certify transcript released by an Italian Representative of the foreign country in which the qualification is obtained – see article 2 (only if the candidate has a non-Italian qualification degree);
- 7) Bachelor/PhD/Master/Specialization diploma (thesis), professional/scientific activities;
- 8) PhD/Master/Specialization degree;
- 9) Scientific publications;
- 10) List of all the qualifications in the application;
- 11) Financial income related to the previous fiscal year (only if the candidate wants to participate for the scholarship).

Date

Signature