CALL FOR APPLICATIONS FOR PLACES IN PH.D. COURSES
XXXIV CYCLE – UNIVERSITY OF CATANIA

Having regard to:

• The charter of the University of Catania in force;
• The Decree of President of the Council of Ministers 09/04/2001 with particular reference to art. 8, ppt. 1 and 7;
• Ministerial Decree n. 45/2013 containing the rules on the modalities of accreditation of universities and Ph.D. courses and the principles for the implementation of Ph.D. courses in the accredited universities and particularly art. 8, pt.2, concerning the possibility of different selection procedures with references to places reserved to graduates from foreign universities;
• The current Regulation of the University of Catania concerning Ph.D. courses;
• The mandatory conclusion of selection procedures by no later than September 30 of each year as in art. 8, par. 1 of the abovementioned Ministerial Decree 45/2013;
• Ministerial Decree n. 40 of 25/01/2018;
• Ministerial Communication prot. n. 3419 del 05/02/2018 “Guidelines concerning the procedure of accreditation of Ph.D. courses academic year 2018/2019 – cycle XXXIV”;
• Ministerial Communication prot. n. 15119 of 15/05/2018 concerning the renewal of accreditation for already accredited courses and the accreditation for newly established courses (academic year 2018/2019);
• The Director Decree of the Ministry of Education, University and Research n.1090 of 04/05/2018 concerning the grant of additional doctoral scholarships through the National Operational Program for Research and Innovation 2014-2020 - academic year 2018/2019 (Cycle XXXIV);
• The decisions of the Board of Trustees of the University of Catania of 20/04/2018 and of 31/05/2018 concerning Ph.D. courses – XXXIV cycle;

All this considered, the following Call is issued by the Rector of the University of Catania

Art. 1 – Selection procedures

1. For the academic year 2018/2019 the University of Catania officially announces the selection procedures for places in the following Ph.D. courses of cycle XXXIV:

1. Agricultural, food and environmental science (international);
2. Basic and applied biomedical sciences (international);
3. Translational biomedicine (international);
4. Biotechnologies;
5. Physics;
6. Law (international);
7. Computer Science (international);
8. Systems, energy, computer and telecommunications engineering;
9. Neuroscience (international);
10. Materials science and nanotechnologies;
11. Chemical Sciences (international);
12. Science of Interpretation;
13. Earth and Environmental science;
14. Sciences of cultural heritage and production;
15. Political science;
16. Complex systems for physical, socio-economic and life science;
17. Evaluation and mitigation of urban and land risks.

2. For all Ph.D. programs listed above course activities begin on October 31 2018.
3. Detailed information on each Ph.D. course, together with the number of scholarships and their sources of funding, is included in the annexed information sheets which constitute integral and substantial part of the Call (annexes 1 to 17).

Art. 2 Admission requirements

1. Applications are open without regard to nationality or age to candidates who hold either a Laurea (Vecchio Ordinamento) or a Laurea specialistica /magistrale or any foreign degree suitable for access to Ph.D. courses by the deadline of the present call.

2. The suitability of the foreign degree is assessed by the selection committee with respect to the rules in force in Italy and in the country where the degree was issued and according to international agreements on degrees recognition.

3. Applications are also open to candidates regularly enrolled in their final year of Laurea Vecchio ordinamento, Laurea specialistica/magistrale or foreign degree course who obtain their final degree by no later than October 31 2018.

   In case these candidates pass the selection, their admission to the Ph.D. course is subject to the submission of a self-certification of degree completion (for holders of Laurea Vecchio Ordinamento or Laurea Specialististica/Magistrale) or a degree certificate (for holders of a degree issued by a foreign university) by no later than November 6 2018. Failure to submit the aforementioned documents within November 6 2018 will lead to the exclusion from the doctoral program.

Art. 3 – Application form

1. The application form is web based and must be completed electronically through the University of Catania online application system available at http://portalestudente.unict.it according to the guidelines in paragraph 10 of the present article. The closing date for the application is July 25 2018.

2. An application fee of € 50,00 as contribution to costs for the organization of the selection is required. It must be paid according to the procedures described at paragraph 10, let. g) of the present article by no later than July 25 2018.

3. The application form can be completed either in Italian or in English and must contain the following information:
   a) name and surname, fiscal code, date and place of birth, address (including postal code), telephone number and e-mail;
   b) nationality;
   c) name of the Ph.D. course for which the candidates intends to apply;
   d) name of his/her degree;
   e) disability with percentage of disability, if any;
   f) declaration of commitment to immediately communicate to dottorati@unict.it any change of address, telephone number or e-mail;
   g) express indication of candidature for a place reserved to graduates from foreign universities (for Ph.D. programmes including this type of places and for graduates meeting this requirement only);
   h) declaration of acknowledgment of the content of the present call.

4. The following annexes must be attached to application form:
   a) Curriculum vitae et studiorum, duly dated and signed, containing the authorization to the treatment of personal data according to the regulation in force;
   b) One of the following documents concerning admission requirements:
      - Self-certification of successful completion of the degree course, for candidates with Laurea Vecchio Ordinamento, Laurea specialistica or Laurea magistrale issued by an Italian university;
      - Degree certificate (including transcript of records, final grade and date of the award of the degree) and request of equivalence (according to the form included in annex n.19, integral to this call), for graduates from foreign universities;
      - Self-certification of enrolment in the final year of the degree course, including transcripts of records, for candidates enrolled in the last year of Laurea Vecchio Ordinamento, Laurea Specialististica and Laurea Magistrale at any Italian Universities, who will complete the course and obtain the degree by no later than October 31 2018;
      - Certificate stating the status of student in the final year, including transcripts of records, for candidates from foreign university who will complete the course and obtain the degree by no later than October 31 2018;
c) Research project;
d) List of publications with relative abstracts, if any;
e) Documents attesting English knowledge or further linguistic skills or computer skills, if any;
f) Documents concerning the completion of further university courses;
g) Declaration concerning the type of place for which the candidate intends to apply (according to the form included in annex n.20, integral to this call), for candidates who intend to apply for Ph.D. courses offering reserved places only;
h) Videoconference request form (according to the form included in annex n.21, integral to this call) for candidates living abroad and unable to reach Catania for the oral exam;
i) Copy of a valid Identity document;

5. All annexes listed in par. 4 must be uploaded one by one in PDF format onto the online application system. No other format than PDF is accepted. If the size of the document is larger than that indicated by the system, this document must be divided into two or more parts to be uploaded separately. All annexes can be either in English or in Italian. Any annex in a language other than English or Italian must be accompanied by a legal translation in English or in Italian, under penalty of inadmissibility to evaluation.

6. Candidates who intend to apply for two or more different Ph.D. courses must complete two or more application forms separately and pay the application fee of € 50,00 for each application.

7. Application forms will not be considered if either incomplete or submitted with different modalities or after the deadline indicated in this article. Furthermore, application forms will not be considered if the application fee is paid after the deadline indicated in par. 2 of this article.

8. Candidates are strongly advised to complete the application procedure well in advance of the expiration date of this call in order to avoid the clogging of the online system due to the volume of applications. The University is not responsible whereas the candidate cannot complete the application procedure because of unforeseeable circumstances, force majeure or any event not imputable to the university’s administration.

9. Candidates are the sole responsible for the authenticity of the information included both in the application form and in the annexes. The university’s administration is entitled to scrutinize the application forms and related annexes according to the legislation in force and exclude, in any moment and provided a proper motivation, those candidates whose applications do not comply with this call requirements.

10. In order to complete the application procedure, each candidate must:
   a) Go to http://portalestudente.unict.it/portalestudente/mapServlet;
   b) Complete the registration entering his/her personal data. On completion of the registration the online system will issue a PIN code to the candidate. The online system will also issue a temporary fiscal code to foreign candidates in order to let them complete the application procedure. (candidates already holding a PIN code will skip this step and start the procedure from c);
   c) Enter his/her fiscal and PIN codes in the login box in order to access to his/her personal account;
   d) Once in his/her account click “Prove di ammissione” and select the chosen Ph.D. course through the drop-down menu;
   e) Enter personal data required and check their correctness;
   f) Confirm the data clicking the apposite confirmation command;
   g) Pay the application fee according to the procedure described at www.unict.it/it/servizi/pagopa;
   h) Upload all the documents required in par. 4 of this article in PDF format onto the online application system;
   i) Print and save copy of the application form and save physical copy of the receipt of payment.

11. Candidates with disability higher than 66% who need assistance during the examination must submit formal request to the University’s Centre for the Integration and Assistance to people with disability and DSA, Via A. di Sangiuliano 259, 95131 Catania, tel. 095/7307182-189-188, e-mail: personalecsd@unict.it, website http://www.cinap.unict.it/, quoting the name of the Ph.D. course for which they have applied. This request must be submitted by no later than July 25 2018.

Art. 4 – Type of places

1. Each Ph.D. courses includes places with scholarship and places without scholarship. After selected candidates are admitted to each doctoral program, the Ph.D. Academic board identifies the beneficiaries of the scholarships based on their study plans.
2. Technical specifications concerning scholarships are reported in the information sheet of the relevant Ph.D. course.

3. Scholarships can be funded by:
   a. University's funds;
   b. Public/private institutions, highly qualified from a scientific/cultural point of view and with suitable personnel, facilities and equipment;
   c. National Operational Program for Research and Innovation 2014-2020 as in the Director Decree of the Ministry of Education, University and Research n. 1090/2018. These scholarships are strictly additional to the scholarship to those referred in point 1 and 2;
   d. Regional Operational Program 2014-2020. These scholarships are strictly additional to the scholarship to those referred in point 1 and 2;
   e. Funds of Department of Excellence.

4. Whenever remained vacant, places reserved to graduates from foreign universities (either with or without scholarship) can be assigned to successful candidates from the list concerning ordinary places.

5. With reference to scholarships funded by public/private institutions (point 3, let. b), they are paid to the University of Catania in three instalments:
   1. The first instalment within thirty (30) days from the communication by the University of Catania of the name of the beneficiary of the scholarship;
   2. Second and third instalments within thirty (30) days from the communication by the University of Catania of the admission of the beneficiary to the academic years following the first.

6. Scholarships funded by external institutions will be paid to the relative beneficiaries subject to the actual collection of the sums by the University.

7. With reference to scholarships funded through the National Operational Program for Research and Innovation 2014-2020 (Director's Degree 1090/2018), they will be paid in three annual instalments subject to the financial reporting of the projects associated to scholarships as in the technical specification annexed to the Director Decree 1090/2018 (available at http://www.ponricerca.gov.it/notizie/2018/dottorati-innovativi-ciclo-34/).

**Art. 5 – Selection procedures**

1. According to each Ph.D. information sheet (see art. 1), candidates' selection can be based on one of the following procedures:
   - Evaluation of qualifications;
   - Evaluation of qualifications, written and oral examinations;
   - Evaluation of qualifications and oral examination.

2. As for the evaluation of qualifications, the following documents will be assessed:
   - *Curriculum vitae et studiorum*;
   - English language certificates, if any;
   - Publications, if any;
   - Research project.

3. In case of Ph.D. courses whose selection procedure is exclusively based on the evaluation of qualifications, pass mark is 80 points out of 120 according to the following criteria:
   - *Curriculum vitae et studiorum* max 36 points;
   - English language certificates, if any max 12 points;
   - Publications, if any max 12 points;
   - Research project max 60 points.

4. In case of Ph.D. courses whose selection procedure is based on the evaluation of qualifications, written and oral examinations, pass mark is an aggregate 80 points out of 120 with minimum 40 points in the evaluation of qualifications, 20 points in the written examination and 20 points in the oral examination. The evaluation of qualifications is based on the following criteria:
   - *Curriculum vitae et studiorum* max 18 points;
   - English language certificates, if any max 6 points;
   - Publications, if any max 6 points;
   - Research project max 30 points.
5. In case of Ph.D. courses whose selection procedure is based on the evaluation of qualifications and oral examination, pass mark is an aggregate 80 points out of 120 with minimum 40 points in the evaluation of qualifications and 40 points in the oral examination. The evaluation of qualifications is based on the following criteria:

- *Curriculum vitae et studiorum* max 18 points;
- English language certificates, if any max 6 points;
- Publications, if any max 6 points;
- Research project max 30 points

6. The research project assessed by the selection committee in the phase of evaluation of qualifications and provisionally discussed in the oral examination is not binding to the research subject effectively assigned to candidates admitted to any doctoral program;

7. In case the selection procedure exclusively consists in the evaluation of qualifications, the selection committee will post the results of the selection on the website of the department offering the Ph.D. course. In case the selection procedure includes a written examination, the selection committee will post the results of the evaluation of qualifications on the website of the Department offering Ph.D. course at least three (3) days prior to the written examination.

In case the selection procedure also includes the oral examination, the selection committee will post the results of the evaluation of qualifications on the website of the Department offering Ph.D. course at least three (3) days prior to the oral examination.

Each Ph.D. selection committee is the sole responsible for the prompt publication of the results of the selection procedure.

8. Written and oral examinations, where included, will be held in the dates, hours and places indicated each Ph.D. course information sheets annexed to this call. No written notice will be sent to candidates. Any variation of date, hour or place will be notified well in advance on [www.unict.it](http://www.unict.it) (section "Bandi, gare e concorsi">"Studenti e post laurea">"Dottorati di ricerca").

Candidates admitted to written and oral examinations must bring with them an identity document.

9. Where expressly stated in the relative Ph.D. information sheet, candidates living abroad who are unable to reach Catania can take the sole oral examination in the form of video conference interview, provided it is held at either a higher education institution or consulate/diplomatic mission.

The candidate is full and sole responsible for the correct indication of the video conference address to be used by the selection committee for the oral interview. The candidate must be available in the date indicated in the related Ph.D. information sheet. The selection committee is entitled to arrange with the candidate the exact time of the oral interview. Before the oral interview, the candidate is required to exhibit his/her identity document.

Non-indication or incorrect indication of video conference address, non-connection - whatever the cause - with either the higher education institution or the consulate/diplomatic mission, unavailability of the candidate on the day and hour established by the selection committee and non-exhibition of the identity document represent causes of exclusion from the selection procedure.

The University of Catania decline all responsibility for any unpredicted technical problem impeding the oral exam in the form of video conference interview.

**Art. 6 – Designation and tasks of the Selection Committee**

1. Each Selection Committee is composed according to art. 13 of the current Regulation of the University of Catania concerning Ph.D. courses.

2. Prior to the evaluation of qualifications, selection committees must establish the criteria of assignation of points to each document to be assessed (curriculum vitae et studiorum, English language certificates, publications and research project). In case of candidates who do not already hold the degree required to access a Ph.D. course, the selection committee must take into account the average grade related to exams passed by the candidate at the moment of the application in order to assess his/her academic career properly. The selection committees can take into account any further qualifications or certifications issued by academic institutions.
3. Prior to written examinations or oral examinations, when included, selection committees must establish the criteria of development and evaluation of these exams and give due information to candidates publishing these criteria on the website of the department offering the Ph.D. course.

4. Upon completion of the selection procedure, each selection committee draws up the list of successful candidates, ranked in descending order of score. Scores being equal, the younger candidate prevails (law 16.6.1998, n. 191). The list is signed by both the President and the Secretary of the Selection committee and is affixed to the Notice board of the University’s Department where the selection takes place and posted on the same Department’s website.

5. In case of places reserved to graduates from foreign universities, the selection committee draws a separate list of successful candidates ranked in descending order of score. Scores being equal, the younger candidate prevails (law 16.6.1998, n. 191). The list is signed by both the President and the Secretary of the Selection committee and is affixed to the Notice board of the University’s Department where the selection takes place and posted on the same Department’s website.

Any reserved place remained vacant after the selection procedure can be made available for candidates in the list concerning ordinary places as in art.4.

Art. 7 – List of successful candidates

1. The list of successful candidates eligible for Ph.D. places are issued through decree of the Rector of the University of Catania. The Rector’s Decrees will be posted on www.unict.it (section “Bandi, gare e concorsi” > "Studenti e post laurea" > "Formazione post laurea" > "Dottorati di ricerca").

Art. 8 – Admission to Ph.D. courses

1. Candidates are admitted to Ph.D. programs according to the descending order on the list of selected candidates until all the places available within each course are allocated. Successful candidates eligible for a place in two or more Ph.D. course are requested to choose the Ph.D. course in which they wish to enroll.

2. Candidates are excluded if they do not comply with enrolment procedures (see art. 9) within the deadline indicated in a further notice. In this case the next candidate in the list in descending order of score becomes eligible to fill the vacant place.

3. As a general rule, it is possible to allocate any places remained vacant due to renunciation of candidates preceding on the list within three months from the beginning of course activities. This term of three months can be extended in case of unavailability of scholarships – even after the beginning of course activities – within the framework of communitarian, ministerial or regional programs expressly concerning Ph.D. courses of Cycle XXXIV (academic year 2018/2019). Incoming candidates, either for places with scholarships or places without scholarships, will be informed by email on enrolment procedures and deadline. Failure to comply with enrolment procedures will lead to the exclusion from the course.

4. Top candidates on the list are admitted to a place with scholarship to the extent of the number of available scholarships. On completion of the allocation of places with scholarships, incoming candidates on the list in descending order of score are admitted to a place without scholarship to the extent of the number of available places without scholarship.

5. Candidates admitted to Ph.D. courses are required to pay enrolment fees as stated in the following article 9.

6. Candidates who have attended a Ph.D. course in a place with scholarship can only be enrolled as Ph.D. student in places without scholarship.

7. Candidates with disability corresponding to 66% are admitted to the programme in supernumerary places without scholarship, even if their position on the list is below the corresponding number of places in the Ph.D. program. Supernumerary places without scholarship reserved to candidates with disability can be up to half of the ordinary places. Candidates with disabilities are exempted from the payment of enrolment fees (Regulation of the University of Catania on Ph.D. Courses, art. 12, pt. 7).

Art. 9 – Enrolment procedures

1. Candidates admitted to Ph.D. courses are officially appointed in a decree of the Rector available at the university’s website www.unict.it (section “Bandi, gare e concorsi” > "Studenti e post laurea" > "Dottorati di ricerca") from October 16 2018 to October 24 2018.

2. Admitted candidates must submit the enrolment form and pay the enrolment fee (see following par. 4, lett. e) according to the procedure described in par. 3 and 4 by no later than the deadline indicated in the
3. The enrolment application must include the following information:
   a) Name and surname, fiscal code, date and place of birth, address (including postal code), telephone number and e-mail;
   b) Disability with indication of percentage, if any;
   c) Declaration of commitment to attend the Ph.D. course full time according to the modalities fixed by the academic board.

4. The enrolment form is web based. To complete the enrolment form candidates must:
   a) Go to http://portalestudente.unict.it/portalestudente/;
   b) Enter their fiscal code and PIN code, already used during the application procedure, in the specific login box;
   c) Click “Immatricolazione” from their personal account;
   d) Enter all the details required in the various stages and confirm them;
   e) Pay the enrolment fee according to the procedure described at www.unict.it/it/servizi/pagopa for an amount of:
      - € 356,00 in case of enrolment in a place with scholarship;
      - € 156,00 in case of enrolment in a place without scholarship;
      - € 16,00 for candidates with disabilities corresponding to 66% or more, whatever the type of place.

5. Enrolment forms submitted with modalities other than those indicated in the present article or after the deadline in the aforementioned notice (see pt. 2) will not be considered. Enrolment forms without the enrolment fee paid in the modalities and by the deadline indicated in the present article will not be considered either. The University of Catania decline all responsibility for failure to complete the enrolment procedure due to either facts not imputable to its administration or fortuitous event or force majeure.

6. Candidates’ failure to comply with the aforementioned provisions is considered equivalent to formal renunciation to the place in the Ph.D. course. Vacant places will be made available for incoming candidates on the list in descending order of score to the extent of the number of available places in the program. These latter candidates will be informed on enrolment procedures and deadline through an email sent to the email address indicated in the application form. Failure to comply with enrolment procedures will lead to the exclusion from the course.

7. The renunciation to a place in a Ph.D. program does not give the right to a refund of the enrolment fee even when the candidate has not attended any course activities.

8. Selected candidates who intend to renounce to a Ph.D. place are strongly requested to send immediate written notice to dottorati@unict.it in order to allow the university’s administration to allocate places remained vacant as quickly as possible to the extent the number of available places in a program. A copy of the identity card in PDF format must be attached to the notice.

9. Selected candidates admitted in places with scholarship must send to dottorati@unict.it the following documents in PDF format within the deadline included the aforementioned communication:
   a) Document from the National Institute for Social Security attesting the candidate’s contributory role;
   b) Declaration concerning the candidate’s registration or non-registration in other forms of social security;
   c) Copy of the fiscal code or health insurance card
   d) Copy of a validity identity document duly signed;
   e) Form including bank details;
   f) Declaration of acknowledgement that scholarships are exempted from income tax imposed on physical persons and that under no circumstances can they give assessments for the purpose of the career;
   g) Certificate attesting foreign nationality (only for foreign candidates);
   h) Residency permit with indication of the authority issuing the permit (only for non-EU candidates).

10. Candidates who benefit from scholarships financed through communitarian, national, regional programs must also submit further documents as required in the related calls. These candidates will be informed on this matter through an email sent to the email address indicated in the application form.

11. Candidates will be duly informed of any change in the enrolment procedure in the same notice as in par. 2 of this article.
Art. 10 - Scholarship

1. Candidates entitled to a scholarship are granted are remunerated according to the law in force.
2. Each scholarship amounts to €15,343.28 per year, before taxes charged on the scholarship holder. This amount is adjusted according to increases established by the law. The amount of the scholarship is increased up to 50% in correspondence and proportionally to study periods at foreign universities or research centres for maximum 18 months of the entire duration of the Ph.D. course.
3. The duration of each scholarship corresponds to the duration of the Ph.D. course (36 months). They are assigned to candidates according to their position on the list of candidates admitted to the Ph.D. course. The grant of the scholarship is confirmed if the candidate is admitted to the year following the first.
4. At the end of each year doctoral students submit a detailed record of their research activity to the academic board. The academic board assesses each doctoral student research work and admits him/her to the following year or expel him/her from the course.
5. By no later than November 15 of each year Ph.D. students must enroll in the following year. The enrolment is subject to the decision of the academic board according to art. 15, par. 4 of the Regulation of the University of Catania for Ph.D. courses. Failure to renew the enrolment leads to the exclusion from the Ph.D. course.
6. The payment of the scholarship is conditioned to the effective attendance to course activities. Any remains will be deposited to be used in subsequent cycles of Ph.D. course.
7. The payment of the scholarship consists in a two-month instalment for November and December and in monthly instalments for the remaining months. Payments are deferred to the months following the month of reference.
8. The provisions concerning tax benefit included in art. 4, Law 476/1984 apply to doctoral scholarships.
9. Scholarships cannot be combined with other financial contributions unless these latter are granted by national or international institutions and destined to research work abroad.
10. Candidates who have already benefited from a doctoral scholarship or even portion of it cannot be granted a scholarship for a second time.

Art. 11 - Rights and duties of Ph.D. Students

1. With reference to rights and duties of Ph.D. students, candidates are required to refer to chapter V of the Regulation of the University of Catania for Ph.D. courses.

Art. 12 - Personal data

1. According to the EU regulation on data protection (EU/2016/679), personal data provided by the candidates will be treated at the University of Catania in accordance with their institutional purposes and the relative legal provisions. The official in charge of the data treated by the University of Catania is Ms Laura Vagnoni, e-mail rdp@unict.it, red@pce.unict.it.

Art. 13 - Officials in charge of procedure

1. According to art.5, subparagraph 1, of Law 241/90, the official in charge of the procedure is:
   - the chairperson of the selection committee with reference to the selection procedure, from the appointment of the committee members to the publication of the selection results;
   - Mr Paolo Moscati, with reference to the procedures connected to the present call;
   - Mr Salvatore Libertini, with reference to the procedures connected to foreign candidates.
1. The administration considers the possibility of modifications, updates or integrations to the present call - to be exclusively advertised through www.unict.it (section “Bandi, gare e concorsi” > “Studenti e Post laurea” > “Dottorati di ricerca”) in case the number of places with scholarships or equivalent type of grants, and consequently the number of places without scholarships, increases due to further funds made available after the issuing of this call provided the respect of the terms of assignation of places to candidates on the pass list.

2. Any aspect(s) related to Ph.D. course and not expressly covered in the present call is governed by Ministerial Decree 45/2013, International cooperation agreements and other legislation in force concerning Ph.D. course.

CATANIA, ........................

THE RECTOR
(F. Basile)

IL PRORETTORE
Prof. Giancarlo Magnano San Lio
<table>
<thead>
<tr>
<th><strong>Title of the Ph.D. course</strong></th>
<th>AGRICULTURAL, FOOD AND ENVIRONMENTAL SCIENCE (INTERNATIONAL)</th>
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<tbody>
<tr>
<td><strong>Cycle</strong></td>
<td>XXXIV</td>
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<tr>
<td><strong>Scientific area</strong></td>
<td>Agriculture</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>3 years</td>
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<tr>
<td><strong>Department</strong></td>
<td>Department of Agriculture, Food and Environment</td>
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<tr>
<td><strong>Department website</strong></td>
<td><a href="http://www.diqa.unict.it/">http://www.diqa.unict.it/</a></td>
</tr>
<tr>
<td><strong>Ph.D. Course Coordinator</strong></td>
<td>Prof. Alessandro Priolo</td>
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<tr>
<td><strong>Partner Institution(s)</strong></td>
<td>Technical University of Lisbon (Portugal)</td>
</tr>
</tbody>
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### Research theme(s)

Due to its interdisciplinary nature covering all sectors of Area 07, the Ph.D. course aims at training professional figures qualified for both pure and applied research in the domain of agriculture, food and environment, capable of:

- organizing and conducting experiments in the diverse phases of the interested industries, interpreting results by means of suitable statistical methodologies;
- making choices allowing to obtain programmed production in terms of quality, quantity and time and without negative impact on the environment and the healthiness of products;
- managing agri-food and environmental systems for the protection of land and water resources;
- managing machinery and products utilized in agriculture and agri-food industry;
- checking, also by means of innovative, eco-compatible technologies, adversities, both biotic and abiotic, threatening agricultural and food produce and agricultural and forest ecosystems;
- analyzing agri-food systems in order to intervene on the planning and management of the diverse industries and to know economic instruments to protect and manage the environment;
- transferring advanced, innovative technologies to agricultural and food processes and products, with respect to eco-sustainability;
- training experts on rural development

### Available places

1) Places with scholarship financed by the University of Catania: 4
2) Places with scholarship financed by the Department of Agriculture, Food and Environment: 1

Scholarship financed for the first six months through Progetto ARIMNet2 2015 ERA-NET EU FP7 "Sustainable Tomato Production: plant defense enhancement, development of new biopesticides and optimization of environmental, water and chemical inputs" (STOMP) n. 6181127, Ente finanziatore MIPAAF, CUP E62I15001740001; for the following nine months through Progetto PRIN 2015 "Biopesticides for sustainable insect pest control" (BIOPIC) prot. N. 20158ABFCF, Ente finanziatore MIUR, CUP E62F15000650001; for the remaining twenty-one months through Progetto SIR 2013 "Target and non-target entomotoxicity of biopesticide nanoformulations" (ENTOBIONANO), Ente finanziatore MIUR, CUP E62I15000690001
3) Places without scholarship: 1
TOTAL: 6

### Selection procedures

1) Evaluation of qualifications;
2) Oral interview

Candidates living abroad can take the form of videoconference interview

### Date, place, format and language of the oral interview

Date: September 28 2018, h. 9:00 (9:00 a.m. Italian time)
Place: Via Valdisavoia n.5 – DiQA – Aula “A. Jannaccone” (1° piano), Catania
Format: Discussion of the submitted project and assessment of the candidate’s knowledge of themes pertaining the Ph.D. course
Language: Italian and English
<table>
<thead>
<tr>
<th>Title of the Ph.D. Course</th>
<th>BASIC AND APPLIED BIOMEDICAL SCIENCES (INTERNATIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Medicine and surgery</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Biomedical and Biotechnological Science</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://biometec.unict.it/">http://biometec.unict.it/</a></td>
</tr>
<tr>
<td>Ph. D. Course Coordinator</td>
<td>Prof. Massimo Libra</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>University of Crete (Greece)</td>
</tr>
<tr>
<td>Research themes</td>
<td>1) Translational oncology, immunology and aging;</td>
</tr>
<tr>
<td></td>
<td>2) Experimental surgery and anatomy;</td>
</tr>
<tr>
<td></td>
<td>3) Molecular Biomedicine and Biotechnology;</td>
</tr>
<tr>
<td></td>
<td>4) Molecular Genetics, Microbiology and Virology</td>
</tr>
<tr>
<td>Available places</td>
<td>1) Places with scholarship financed by the University of Catania: 4</td>
</tr>
<tr>
<td></td>
<td>2) Places without scholarship: 1</td>
</tr>
<tr>
<td></td>
<td>TOTAL: 5</td>
</tr>
<tr>
<td>Selection Procedure</td>
<td>1) Evaluation of qualifications</td>
</tr>
<tr>
<td>Title of the Ph.D.</td>
<td>TRA SLATIONAL BIOMEDICINE (INTERNATIONAL)</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Medicine and Surgery</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Clinical and Experimental Medicine</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.medclin.unict.it">http://www.medclin.unict.it</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Lorenzo Malatino</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>University of Granada (Spain)</td>
</tr>
<tr>
<td>Research themes</td>
<td>Physiopathology of complex diseases: from clinical observation to molecular mechanisms</td>
</tr>
</tbody>
</table>
| Available places  | 1) Places with scholarship financed by the University of Catania: 4  
|                   | 2) Places with scholarship financed by Novartis Farma S.p.A.: 2  
|                   | Research themes connected to Chronic myeloid leukemia  
|                   | 3) Places without scholarship: 1  
|                   | TOTAL: 7                                 |
| Selection procedures | 1) Evaluation of qualifications  
|                    | 2) Oral interview  
|                    | Candidates living abroad can take the form of videoconference interview |
| Date, places, format and language | Date: September 20 2018, h. 9,00 (9,00 am Italian time)  
|                               | Place: aula Endocrinologia, Ospedale Garibaldi Nesima, Torre C, 1° piano meno 1, Via Palermo, 636 – Catania  
|                               | Format: discussion of the submitted project  
|                               | Language: Italian                        |
Title of the Ph.D. course: BIOTECHNOLOGIES

Cycle: XXXIV
Scientific area: INTERDISCIPLINARY
Duration: 3 years
Department: Department of Biomedical and Biotechnological Sciences
Department website: http://biometec.unict.it/
Ph.D. Course Coordinator: Prof. Vito De Pinto
Partner Institution(s): None

Available places: 6

Selection procedures:
1) Evaluation of qualifications
2) Oral Interview
Candidates living abroad can take the oral interview in the form of video conference interview

Date, place, format and language of the oral interview:
Data: September 25 2018, h. 10.00 (10.00 am Italian time)
Place: Dipartimento di Scienze Biomediche e Biotecnologiche, Via Santa Sofia n.97, Catania (examination room to be determined)
Format: interview focusing on the candidate's qualifications and career, the research project chosen by the candidate, on his/her reasons for the choice of the theme and on his/her scientific knowledge suitable to carry out the chosen project.
Language: Italian and English

Research themes

Molecular Biotechnologies
1) Novel mechanisms of cell-to-cell communication: extracellular vesicles in CNS health and disease;
2) Identification and modulation of DNA-protein molecular interaction: principles of biological recognition for therapeutic approach;
3) Crystallization and structural analysis of membrane proteins;
4) Use of interfering peptides to fight interactions between VDAC1 and proteins/peptides associated to neuro-degenerative diseases;
5) Role of metal-chaperone and research of new targets in neovascular disorders.

Biomedical and Preclinical biotechnologies
1) Innovative Cell Strategies with Stem/neuroprogenitors and Astrocytes to Boost Neurorepair/Regeneration in Neurodegenerative Diseases;
2) Receptors stimulating adenylylate cyclase as new pharmacological targets for the Chromosome X Fragile Syndrome;
3) Preclinical approaches of regenerative medicine: use of scaffold 3D in osteochondral regeneration;
4) Synaptic dysfunction in neurodevelopmental disorders associated to autism and intellectual disability;
5) Biotechnological approaches and preclinical imaging in animal modelling of neurodegenerative diseases.

Agri-food biotechnologies
1) Lactic bacteria and functional food, an historical association for a new challenge
2) Oxic sciences and analysis of host-pathogen interaction for the purpose of resistance;
3) "Priming process" effect in the response to abiotic stress in Citrus plants; analysis of transcriptome, epigenetic modifications and microbiome alterations;
4) Genomics, transcriptomics and proteomics of animal production;
5) Zootecnic biotecnological mechanisms of adaptation to hot climate;
6) Cross-talk analysis of hormone metabolism and sugar transport during the differentiation of the inflorescence of barley and Caryopsis development

Pharmaceutical Biotechnologies
1) Nanobiomaterials as Targeted Delivery System in the therapeutic area;
2) Planning and synthesis of new "molecular tools" as theranostic and multimodal instruments

Annex n. 4
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>PHYSICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific field</td>
<td>Mathematics, physics and natural sciences</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Physics and Astronomy</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.dfa.unict.it/">http://www.dfa.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. course Coordinator</td>
<td>Prof. Vincenzo Bellini</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>National Institute for Nuclear Physics (INFN)</td>
</tr>
</tbody>
</table>
| Research Themes          | Themes related to the Ph.D. course curricula:  
|                          | 1. Nuclear and sub-nuclear Physics;  
|                          | 2. Matter Physics and Quantum Technology;  
|                          | 3. Astrophysics;  
| Available places         | Ordinary places:  
|                          | 1) Places with scholarship financed by the National Institute for Nuclear Physics-Laboratori Nazionali del Sud: 2  
|                          | 2) Places with scholarship financed by National Institute for Nuclear Physics -Catania: 1  
|                          | 3) Places with scholarship financed BY THE University of Catania: 2  
|                          | 4) Places without scholarship: 1  
|                          | TOTAL: 6 |
| Selection procedures     | Ordinary places:  
|                          | 1) Evaluation of qualifications;  
|                          | 2) Written exam;  
|                          | 3) Oral interview. |
|                          | Places reserved to graduates from foreign universities:  
|                          | 1) Places with scholarship financed by the University of Catania: 1  
|                          | TOTAL: 1 |
| Date, place, format, duration and language of the written examination | Date: September 12 2018, h. 9:30 (9,30 am Italian time)  
|                          | Place: Dipartimento di Fisica ed Astronomia, via S. Sofia, n. 64 - Catania  
|                          | Format: Short paper plus physics exercises  
|                          | Duration: 210 minutes  
|                          | Language: Italian or English |
| Date, place, format and language of the oral interview | Date: September 14 2018, h. 9:30 (9,30 am Italian time)  
|                          | Place: Dipartimento di Fisica ed Astronomia, via S.Sofia, n. 64 - Catania  
|                          | Format: Discussion of the research project and assessment of the candidate's knowledge of Physics necessary to complete the project.  
<p>|                          | Language: Italian or English |</p>
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>LAW (INTERNATIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific field</td>
<td>Law</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Law</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.lex.unict.it/">http://www.lex.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Anna Maria Maugeri</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>University of Castilla – La Mancha (Spain)</td>
</tr>
</tbody>
</table>

**Research themes**

The Ph.D. course is aimed at training lawyers expert in techniques and methodologies of legal research, providing them with tools suitable for the identification of solution of interest conflicts in a globalised reality. To this purpose, the structure of the course consists, on one hand, in the in-depth analysis of interdisciplinary and general topics connected to legal studies (not only related to positive law, but also involving historical and philosophical aspects), and in the study of argumentation techniques and legal research methodology, including comparison to foreign systems and confrontation to European Union law and international law; on the other, in a specific study related to scientific sectors on which the final thesis is focused. The course is aimed at teaching research methods through an approach in the domain of the so called multilevel constitutionalism, featuring all branches of law and proceeding from the European Convention of Human Rights, as interpreted by the Court of Strasbourg, and the fundamental principles of the EU (enshrined in the Chart of fundamental rights) in the light of the jurisprudence of the Court of Justice to national constitutions as interpreted by constitutional courts. Here follows the scientific domains coherent with the Ph.D. learning outcomes: private law, comparative law, commercial law, labour law, constitutional law, administrative law, church and canon law, tax law, international law, European Union law, civil procedural law, criminal procedural law, criminal law, Roman law and law of ancient societies, history of medieval and modern law, philosophy of law.

**Available places**

1) Places with scholarship financed by the University of Catania: 4  
2) Places with grant Department of Excellence: 1  
3) Places without scholarship: 1  
**TOTAL: 6**

**Selection procedures**

1) Evaluation of qualifications  
2) Written examination  
3) Oral examination

**Date, place, format, duration and language of the written examination**

Date: September 12 2018 h. 8.30 (8.30 am Italian time)  
Place: Dipartimento di Giurisprudenza, Via Gallo 24 – 95124 Catania  
Format: short paper, set of open-ended questions  
Duration: 6 hours (360 minutes)  
Language: Italian (foreign candidates can choose from one of the following languages: Italian, English or Spanish)

**Date, place, format and language of the oral examination**

Date: September 26 2018 h. 8.30 (8.30 am Italian time)  
Place: Dipartimento di Giurisprudenza, Via Gallo 24 – 95124 Catania  
Format: Discussion of the submitted project, assessment of knowledge of research themes concerning the Ph.D. course.  
Language: Italian (foreign candidates can choose from one of the following languages: Italian, English or Spanish)
**Title of the Ph.D. course** | COMPUTER SCIENCE (INTERNATIONAL)
---|---
**Cycle** | XXXIV
**Scientific area** | Mathematics, physics and natural science
**Duration** | 3 years
**Department** | Department of Mathematics and Computer Science
**Department website** | http://web.dmi.unict.it
**Ph.D. course Coordinator** | Prof. Sebastiano Battiato
**Partner Institution(s)** | University of Hertfordshire (U.K.)

### Research themes
- Algorithms and Combinatorics
- Artificial Intelligence
- Assistive Technologies;
- Autonomous Systems;
- Big Data;
- Computer Vision and applications;
- Cryptography and Safety Information;
- Information Forensics and Security;
- Pattern Recognition and Machine Learning;
- Smart Cities & Communities;
- Distributed systems;
- Video Analytics (e.g. Retail, Security, etc.)

### Available places
1) Places with scholarship financed by the University of Catania: 4
2) Places with scholarship financed by the Department of Pharmaceutical Sciences – Project STriTuVaD: In Silico Trial for Tuberculosis Vaccine Development (H2020 SC1-2016-2017): 1
   - Research theme: Agent based modelling to predict the effect of vaccinations strategies against Tuberculosis in clinical trials
3) Places with scholarship financed by OrangeDeV S.r.L.: 1
   - Research theme: Active Vision for Robot Localization
4) Places with scholarship financed by Linkverse S.r.L.: 1
   - Research theme: Automatic understanding of endoscopic videos
5) Places without scholarship: 2
**TOTAL: 9**

### Selection procedures
- Evaluation of qualifications
<table>
<thead>
<tr>
<th><strong>Title of the Ph.D. Course</strong></th>
<th>SYSTEMS, ENERGY, COMPUTER AND TELECOMMUNICATION ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cycle</strong></td>
<td>XXXIV</td>
</tr>
<tr>
<td><strong>Scientific area</strong></td>
<td>Industrial and Information Engineering</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>3 years</td>
</tr>
<tr>
<td><strong>Department</strong></td>
<td>Department of Electric, Electronic and Computer Engineering</td>
</tr>
<tr>
<td><strong>Department website</strong></td>
<td><a href="http://www.dieei.unict.it/">http://www.dieei.unict.it/</a></td>
</tr>
<tr>
<td><strong>Ph.D. Course Coordinator</strong></td>
<td>Prof. Paolo Arena</td>
</tr>
<tr>
<td><strong>Partner Institution(s)</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

**Research themes**


The course provides candidates with a skill profile that associates technical-scientific training with the development of a research project to be carried out at highly qualified institutions, both national and international, or enterprises. The academic board is integrated by foreign academics who support candidates in their training and research work.

**Available places**

1) Places with scholarship financed by the University of Catania: 6
2) Places with scholarship financed by the Department of Electric, Electronic and Computer Engineering of the University of Catania: 1
   **Research theme:**
   "Power devices in Si, SiC and GaN, switching converters and their industrial applications"
3) Places without scholarship: 1
4) Places without scholarship reserved to graduates from foreign universities: 1
   **TOTAL:** 9

**Selection procedures**

Evaluation of qualifications
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>NEUROSCIENCE (INTERNATIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Medicine and surgery</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Biomedical and Biotechnological Science</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://biometec.unict.it/">http://biometec.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Salvatore Salomone</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>University of Bordeaux (France)</td>
</tr>
</tbody>
</table>
| Research themes          | Neuropsychopharmacology (preclinical models of addiction, depression schizophrenia, dopaminergic system)  
                          | Ocular pharmacology (preclinical models, in vitro and in vivo, of retinophaty, preclinical models of glaucoma)  
                          | Pharmacological approaches to the stroke and pathophysiology of cerebral circulation  
                          | Biological basis of neurodegenerative diseases  
                          | Innovative drug delivery systems (e.g. nanoparticle) and CNS drug delivery systems  
                          | Stem cells and cell differentiation to natural type  
                          | Clinical neuroscience of neurodegenerative diseases  
                          | Primary SNC cancers |
| Available places         | 1) Places with scholarship financed by the University of Catania: 4  
                          | 2) Places with scholarship financed by IRRCS Associazione Oasi Maria SS Onlus: 1  
                          | 3) Places without scholarship: 1  
                          | **TOTAL:** 6 |
| Selection procedure      | 1) Evaluation of qualifications;  
                          | 2) Oral interview  
                          | Candidates living abroad can take the oral interview in the form of videoconference interview |
| Date, place, format and language of the oral interview | Date: September 17 2018, h. 9,00 (9,00 AM Italian Time)  
                          | Place: Torre Biologica, Via S. Sofia 97, Catania (Sala riunioni, second floor, torre sud)  
                          | Content: Discussion of the submitted project in connection to the research themes pertinent to the Ph.D. course  
<pre><code>                      | Language: English |
</code></pre>
<table>
<thead>
<tr>
<th><strong>Title of the Ph.D. Course</strong></th>
<th>MATERIALS SCIENCE AND NANOTECHNOLOGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cycle</strong></td>
<td>XXXIV</td>
</tr>
<tr>
<td><strong>Scientific area</strong></td>
<td>Mathematics, Physics and Natural Science</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>3 years</td>
</tr>
<tr>
<td><strong>Department</strong></td>
<td>Department of Physics and Astronomy</td>
</tr>
<tr>
<td><strong>Department website</strong></td>
<td><a href="http://www.dfa.unict.it/">http://www.dfa.unict.it/</a></td>
</tr>
<tr>
<td><strong>Ph.D. Course Coordinator</strong></td>
<td>Prof. Maria Grazia Grimaldi</td>
</tr>
<tr>
<td><strong>Partner Institution(s)</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Research themes</strong></td>
<td>Materials and nanotechnologies for the environment, Energy, health, electronics and photonics</td>
</tr>
</tbody>
</table>
| **Available places**          | 1) Places with scholarship financed by the University of Catania: 6  
|                               | 2) Places with scholarship financed by Laser Systems and Solutions of Europe SAS (Lasse): 1  
|                               | 3) Places without scholarship: 1  
| **TOTAL:**                    | 8                                       |
| **Selection procedures**      | 1) Evaluation of qualifications;  
|                               | 2) Oral Interview.  
|                               | Candidates living abroad can take the oral interview in the form of video-conference interview |
| **Date, place, format and language of the oral interview** | Date: September 20 2017, h. 9,00 (9 am Italian time)  
|                               | Place: Dipartimento di Fisica e Astronomia, via S. Sofia 64, Catania  
|                               | aula A (examination room A)  
|                               | Format: discussion of the research project with reference to basic themes, assessment of the candidate’s knowledge of the preparation, characterization and properties of nanostructured materials  
<p>|                               | Language: Italian or English |</p>
<table>
<thead>
<tr>
<th>Title of the Ph.D. Course</th>
<th>CHEMICAL SCIENCES (INTERNATIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cycle</strong></td>
<td>XXXIV</td>
</tr>
<tr>
<td><strong>Scientific area</strong></td>
<td>Mathematics, physics and natural science</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>3 years</td>
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<tr>
<td><strong>Department</strong></td>
<td>Department of Chemical Science</td>
</tr>
<tr>
<td><strong>Department website</strong></td>
<td><a href="http://www.dipchi.unict.it/">http://www.dipchi.unict.it/</a></td>
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<tr>
<td><strong>Ph.D. Course Coordinator</strong></td>
<td>Prof. Salvatore Sortino</td>
</tr>
<tr>
<td><strong>Partner Institution(s)</strong></td>
<td>University of Gothenburg (Sweden)</td>
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<tr>
<td><strong>Research themes</strong></td>
<td>Nanomedicine, Energy conversion and Environment protection, Supramolecular Chemistry, Chemistry of Natural compounds</td>
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</tbody>
</table>
| **Available places**     | 1) Places with scholarship financed by the University of Catania: 4  
                            2) Places without scholarship: 1  
                            **TOTAL: 5** |
| **Selection procedures** | 1) Evaluation of qualifications  
                            2) Oral Interview  
                            Candidates living abroad can take the oral interview in the form of video conference interview |
| **Date, place, format and language of the oral interview** | Date: September 25 2018, h. 9.00 (9.00 am Italian time)  
Place: Dipartimento di Scienze Chimiche, Viale Andrea Doria 6, Catania  
Format: Presentation of the Research project and assessment of the candidate's basic knowledge concerning research activity.  
Language: English |
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>SCIENCE OF INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Humanities</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Humanities</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.disum.unict.it/">http://www.disum.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. course Coordinator</td>
<td>Prof. Antonino Sichera</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>None</td>
</tr>
<tr>
<td>Research themes</td>
<td>Philosophical hermeneutics; Literary hermeneutics; Linguistics and translation; Philology of texts and critical editions; Linguistic analysis and hermeneutics of texts; Digital humanities</td>
</tr>
</tbody>
</table>
| Available places         | 1) Places with scholarship financed by the University of Catania: 6  
2) Places without scholarship: 1  
TOTAL: 7                   |
| Selection procedures     | 1) Evaluation of qualifications  
2) Oral interview  
Candidates living abroad can take the oral interview in the form of video conference interview |
| Date, place, format and language of the oral interview | Date: September 26 2018, h. 10.00 (10.00 am Italian time)  
Place: Dipartimento di Scienze Umanistiche (Piazza Dante 32 – 95124 CATANIA)  
Format: discussion of the submitted project, knowledge of research themes connected to the Ph.D. course.  
Language: Italian – The candidate's knowledge of English will also be assessed during the oral interview |
### Title of the Ph.D. Course
- EARTH AND ENVIRONMENTAL SCIENCES

### Cycle
- XXXIV

### Scientific area
- Mathematics, Physics and Natural Science

### Duration
- 3 years

### Department
- Department of Biological, Geological and Environmental Science

### Department website
- [http://www.dipbiogeo.unict.it/](http://www.dipbiogeo.unict.it/)

### Ph.D. Course Coordinator
- Prof. Agata Di Stefano

### Partner Institution(s)
- None

#### Research themes
- Four (4) places with scholarship: Curriculum GEOSCIENCE;
- One (1) place with scholarship: Curriculum ENVIRONMENTAL BIOLOGY AND BIOTECHNOLOGIES on the research theme “Evaluation of the effects of xenobiotics on the reproduction and the development of model organisms”;
- One (1) place with scholarship: Curriculum ENVIRONMENTAL BIOLOGY AND BIOTECHNOLOGIES on the research theme “Genome organization in interphase nuclei, also in correlation with genetic based human pathologies”;
- One (1) place without scholarship: Curriculum ENVIRONMENTAL BIOLOGY AND BIOTECHNOLOGIES on the research theme “Identification of nanoparticles in water and fresh and processed food products: analysis of potential effects on human health.”

#### Available places
- 1) Places with scholarship financed by the University of Catania: 6
- 2) Places without scholarship: 1
- **TOTAL: 7**

#### Selection procedures
- 1) Evaluation of qualifications
- 2) Oral Interview
- Candidates living abroad can take the oral interview in form of video conference interview

#### Date, place, format and language of the oral interview
- **Date:** September 20 2018, h. 9,00 (9,00 am Italian time)
- **Luogo:** Dipartimento di Scienze Biologiche, Geologiche e Ambientali, Sezione di Scienze della Terra, corso Italia, 57 - 95129 CATANIA (info tel. 095-7195713; - 787)
- **Format:** discussion of the submitted project, assessment of knowledge of research themes pertaining the Ph.D. course
- **Language:** Italian
<table>
<thead>
<tr>
<th>Title of the Ph.D. Course</th>
<th>SCIENCES OF CULTURAL HERITAGE AND PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Humanities</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Humanities</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.disum.unict.it/">http://www.disum.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Pietro Militello</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>None</td>
</tr>
</tbody>
</table>
| Available places         | 1) Places with scholarship financed by the University of Catania: 6  
2) Places without scholarship: 1  
**TOTALE: 7** |
| Selection procedures     | 1) Evaluation of qualifications;  
2) Oral interview  
Candidates living abroad can take the oral interview in the form of video conference interview |
| Date, place, format and language of the oral interview | Date: 27/09/2018, h. 9.30 (9.30 a.m. Italian time)  
Place: Dipartimento di Scienze Umanistiche (Piazza Dante 32 – 95124 CATANIA)  
Format: assessment of knowledge pertaining the Ph.D. Course, discussion of the submitted project  
Language: Italian. The oral interview can be conducted in English in case of candidates who are not native Italian speakers. |
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>POLITICAL SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific area</td>
<td>Political science</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Political and Social Science</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.dps.unict.it/">http://www.dps.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. course Coordinator</td>
<td>Prof. Fabrizio Sciacca</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>None</td>
</tr>
</tbody>
</table>

Research Themes

Research themes compatible with the interdisciplinary nature of the Ph.D. course interpretable through the Ph.D. scientific sectors (SPS/01, SPS/02, SPS/03, SPS/04, SPS/07, SPS/09, SPS/10, SPS/11, SPS/12, SPS/13, IUS/08, IUS/10, IUS/12, IUS/17, IUS/21, M-STO/02, M-STO/04, M-PED/01, M-DEA/01, M-FIL/01, L-LIN/12) with particular reference to the complexity of the political dimension.

Available places

1) Places with scholarship financed by the University of Catania: 6;  
2) Places without scholarship: 1.  
**TOTAL**: 7

Selection procedures

1) Evaluation of qualifications;  
2) Oral interview.  
Candidates living abroad can take the oral interview in the form of video conference interview

Date, place, format and language of the oral interview

**Date**: September 25 2018 ore 8.45 (8.45 am Italian time).  
**Place**: Dipartimento di Scienze politiche e sociali, Via Vittorio Emanuele II 49, Catania. Aula riunioni (I piano).  
**Format**: the oral interview principally consists in a discussion of the candidate’s research project with reference to the themes and methodologies pertinent to Ph.D. course in Political science  
**Language**: Italian
<table>
<thead>
<tr>
<th>Title of the Ph.D. course</th>
<th>COMPLEX SYSTEMS FOR PHYSICAL, SOCIO-ECONOMIC AND LIFE SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific field</td>
<td>Interdisciplinary</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Physics and Astronomy</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.dfa.unict.it/">http://www.dfa.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Andrea Rapisarda</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>None</td>
</tr>
<tr>
<td>Research themes</td>
<td>Complex systems, agent-based models, Big Data analysis, network science, bioinformatics, econophysics, sociophysics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Places</th>
<th>Ordinary places:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) Places with scholarship financed by the University of Catania: <strong>5</strong></td>
</tr>
<tr>
<td></td>
<td>2) Places without scholarship: <strong>1</strong></td>
</tr>
<tr>
<td>TOTAL: <strong>6</strong></td>
<td><strong>5</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Selection procedures</th>
<th>Ordinary places:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) Evaluation of qualifications;</td>
</tr>
<tr>
<td></td>
<td>2) Oral interview</td>
</tr>
<tr>
<td></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Selection procedures</th>
<th>Places reserved to graduates from foreign universities:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) Evaluation of qualifications;</td>
</tr>
<tr>
<td></td>
<td>2) Oral interview</td>
</tr>
<tr>
<td></td>
<td>Candidates living abroad can take the oral interview in the form of video conference interview</td>
</tr>
<tr>
<td></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date, place, format and language of the oral interview</th>
<th>Date: September 18 2018, h. 9.30 (9.30 am Italian time)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Place: Dipartimento di Fisica e Astronomia, via S.Sofia 64, Catania</td>
</tr>
<tr>
<td></td>
<td>Format: Discussion of the submitted project, assessment of knowledges pertaining the Ph.D. Course</td>
</tr>
<tr>
<td></td>
<td>Language: English</td>
</tr>
<tr>
<td>Title of the Ph.D. course</td>
<td>EVALUATION AND MITIGATION OF URBAN AND LAND RISKS</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Cycle</td>
<td>XXXIV</td>
</tr>
<tr>
<td>Scientific field</td>
<td>Engineering and Architecture</td>
</tr>
<tr>
<td>Duration</td>
<td>3 years</td>
</tr>
<tr>
<td>Department</td>
<td>Department of Civil Engineering and Architecture</td>
</tr>
<tr>
<td>Department website</td>
<td><a href="http://www.dicar.unict.it/">http://www.dicar.unict.it/</a></td>
</tr>
<tr>
<td>Ph.D. Course Coordinator</td>
<td>Prof. Massimo Cuomo</td>
</tr>
<tr>
<td>Partner Institution(s)</td>
<td>None</td>
</tr>
</tbody>
</table>

Research themes

The Doctoral Programme includes 3 curricula:
- Engineering for Hydraulic, Environmental and Transport Infrastructures.
- Structural and Geotechnical Engineering
- Plan and Design for the Territory and the Environment.

Some of the research topics developed in the PhD course are described in the Department web site. They pertain to the safety assessment of urban and territorial infrastructures subjected to various hazards, to the development of new strategies, materials and processes aimed to improve the performances and the efficiency of buildings and infrastructures, with respect to safety, energy saving, environmental protection etc.

Subjected to approval by the Ministry of Education, three special projects are offered this year within the programme for PhD courses with an industrial characterization, financed by the European Programme PON:
- Development of an integrated system for risk mitigation of navigation in port areas.
- Seismic and energetic retrofitting of RC framed buildings by means of panels with cross laminated planks.
- Design and implementation of high performance Tendo and Tenso-structures with hi-tech materials for civil and industrial applications.

Available places

1) Places with scholarship financed by the University of Catania: 6
2) Places without scholarship: 1
TOTAL: 7

Selection procedures

1) Evaluation of qualifications;
2) Written examination;
3) Oral Interview

Date, place, format, duration and language of the written examination
- Date: September 24 2018, h. 8.30 (8,30 AM Italian time)
- Place: Aula Do2 Edificio 14, Viale Andrea Doria 6, Catania
- Format: Written paper
- Duration: 4 hours
- Language: Italian or English

Date, place, format and language of the oral interview
- Date: September 26 2018, h. 8.30 (8,30 AM Italian time)
- Place: Aula D41, Edificio 14, Viale Andrea Doria 6, Catania
- Format: Dissertation on the research project
- Language: Italian or English
REQUEST OF EQUIVALENCE

The undersigned................................................................. (name and surname)
born in ................................................................. (place of birth)
on ........................................................................ (date of birth)
nationality ..........................................................................................................................

requests to the selection committee for the Ph.D. course in
................................................................................................................................. XXXIV cycle

the recognition of equivalence to Laurea Magistrale of the following diploma:

Name of the master degree: ........................................................................................................

Awarding university: ...................................................................................................................

Country: .................................................................................................................................

Date of awarded diploma ........................................................................................................

Place and date,
.................................................................................................................................

................................................................. Signature
.................................................................................................................................
ANNEX n. 19

Declaration concerning the type of place
(for candidates applying for Ph.D. courses offering reserved places only)

I, the undersigned

<table>
<thead>
<tr>
<th>Surname:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender:</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth:</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td></td>
<td>City</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td></td>
</tr>
</tbody>
</table>

| Residence: | City |
|            | Country |
|            | e-mail |

DECLARE (Please tick one of the following)

for ordinary places

for reserved places

Ph.D. course in:

__________________________________________

(PLACE) / (DATE) / (APPLICANT'S SIGNATURE)
VIDEO CONFERENCE INTERVIEW FORM
(art. 5 Call for applications)

WARNING: to be filled in as part of the application process where applicable and to be uploaded (through the procedure available at the link http://portalestudente.unict.it/portalestudente/mapServlet) by the deadline for submitting the admission application with a copy of a valid ID document.

I, the undersigned

<table>
<thead>
<tr>
<th>Surname:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Gender: M</td>
<td>F</td>
</tr>
<tr>
<td>Birth: Date</td>
<td>City</td>
</tr>
<tr>
<td>Residence: City</td>
<td>Country</td>
</tr>
</tbody>
</table>

REQUEST
to take the interview for the admission to the Ph.D. in ____________________________
in video conference, as specified in the relevant attachment to the Admission Announcement and therefore provide the technical details required:

Video conference software: ____________________________

Personal account for the remote connection: ____________________________

I ALSO DECLARE
to be aware of the provisions of the Admission Announcement, particularly art. 3 and. 5

(PLACE) / / (APPLICANT'S SIGNATURE)