# NOTICE OF OPEN COMPETITION

# EPSO/AST/126/12 — Assistants (AST 3), research sector

(2012/C 394 A/02)

The European Personnel Selection Office (EPSO) is organising an open competition, based on qualifications and tests, to constitute a reserve from which to recruit **assistants** (\*) **in the following fields:** 

- 1. BIOLOGY, LIFE AND HEALTH SCIENCES
- 2. CHEMISTRY
- 3. PHYSICS AND MATERIALS SCIENCE
- 4. NUCLEAR RESEARCH
- 5. CIVIL AND MECHANICAL ENGINEERING
- 6. ELECTRICAL ENGINEERING AND ELECTRONICS

The purpose of this competition is to draw up reserve lists from which to fill vacant posts in the European institutions, mainly at the European Commission's Joint Research Centre (JRC). Most of the posts will be in the various institutes of the JRC:

- Institute for Transuranium Elements (ITU) in Karlsruhe, Germany
- Institute for Reference Materials and Measurements (IRMM) in Geel, Belgium
- Institute for Health and Consumer Protection (IHCP) in Ispra, Italy
- Institute for Environment and Sustainability (IES) in Ispra, Italy
- Institute for the Protection and Security of the Citizen (IPSC) in Ispra, Italy
- Ispra Site Management in Italy
- Institute for Prospective Technological Studies (IPTS) in Seville, Spain
- Institute for Energy and Transport (IET) in Petten, the Netherlands

For the 'nuclear research' field, a limited number of posts (6) will be at the European Commission in Luxembourg, in particular in the Directorate-General for Energy (DG ENER).

Before applying, you should carefully read the guide to open competitions published in Official Journal C 270 A of 7 September 2012 and on the EPSO website.

This guide is an integral part of the competition notice and will help you to understand the rules governing the procedure and how to apply.

<sup>(\*)</sup> Any reference in this notice to a person of the male sex must be deemed also to constitute a reference to a person of the female sex.

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**ANNEXES** 

# I. GENERAL BACKGROUND

Number of successful candidates sought per field	
2. Remarks	You may not apply for more than one of these fields.  You must make your choice when you apply online and you will not be able to change it after you have confirmed and validated your online application form.

# II. DUTIES

Details on the profiles sought can be found in the annexes.

# III. ELIGIBILITY REQUIREMENTS

On the closing date for online applications, you must fulfil all of the following general and specific conditions:

# 1. General conditions

- (a) You must be a citizen of one of the Member States of the European Union.
- (b) You must enjoy your full rights as a citizen.
- (c) You must have fulfilled any obligations imposed on you by the laws on military service.
- (d) You must meet the character requirements for the duties involved.

# 2. Specific conditions

2.1.	Qualifications
	See point 2 of the annexes.

2.2.	Professional experience See point 3 of the annexes.
2.3.	Knowledge of languages (¹)
language 1	Main language Thorough knowledge of one of the official languages of the European Union.
and	
language 2	Second language (must be different from language 1) A satisfactory knowledge of English, French or German.
	In conformity with the judgment rendered by the EU Court (Grand Chamber) in Case C- $566/10$ P, Italian Republic $\nu$ Commission, the EU institutions are required to state the reasons for limiting the choice of the second language in this competition to a restricted number of EU official languages.
	Candidates are therefore informed that the second language options in the present competition have been defined in accordance with the interest of the service which requires that newly recruited colleagues are immediately operational and able to communicate efficiently in their daily work. Otherwise the effective functioning of the institutions would be severely impaired.
	On the basis of a long-standing practice of the EU institutions as regards the languages used for internal communication and also taking into account the needs of the services regarding external communication and handling of files, English, French and German remain the most widely used. Moreover, English, French and German are the second languages by far the most widely chosen by the candidates of competitions where they have a free choice. This confirms current educational and professional standards, whereby candidates for European Union posts can be deemed to master at least one of these languages. Therefore, in balancing the interest of the service and the needs and capacities of the candidates by also taking account of the particular field of this competition, it is legitimate to organise tests in these three languages in order to ensure that, whatever their first official language, all candidates master at least one of these three official languages at working level. Moreover, in the interest of equal treatment of all candidates, everyone, including those whose first official language is one of these three, is required to take the test in his or her second language, chosen from among these three. Assessment of specific competences in this way allows the institutions to evaluate the ability of candidates to immediately perform in an environment that closely matches the reality they would face on the job. This is without prejudice to later language training so as to acquire a capacity to work in a third language in accordance with Article 45(2) of the Staff Regulations.

# IV. ADMISSION TO THE COMPETITION AND SELECTION BASED ON QUALIFICATIONS

# 1. Procedure

Initially, a check for compliance with the general and specific conditions, and the selection based on qualifications, will be carried out on the basis of the information given in your online application.

(a) Your responses to the questions concerning the general and specific conditions will be processed to determine whether you can be included in the list of candidates who fulfil all the conditions for admission to the competition.

<sup>(</sup>¹) See the Common European Framework of Reference for Languages (CEFR) — required level: language 1 = C1, language 2 = B2 (http://europass.cedefop.europa.eu/europass/home/hornav/Downloads/CEF/LanguageSelfAssessmentGrid.csp).

- (b) The selection board will then screen the candidates who fulfil the conditions for admission to the competition on the basis of their qualifications to identify those whose profile (particularly their diplomas and professional experience) best matches the duties and selection criteria set out in this competition notice. This selection is carried out **solely** on the basis of the information you provided in the 'Talent Screener' tab and takes place in two stages:
  - a first selection based on qualifications will be made **solely** on the basis of the responses ticked under the 'Talent Screener' tab of the online application form and the weighting assigned to each of the questions. The selection board will set the weighting (1 to 3) according to the importance attached to each criterion set out in point 4 below, before examining the applications. The online applications of the candidates who obtain the highest number of points will then go through to a second selection stage,
  - the number of files to be examined during the second stage will be approximately **nine times** the number of successful candidates sought that is indicated in this competition notice. The selection board will examine candidates' answers and will award 0 to 4 points for each answer. The points are then multiplied by the weighting for each question and added together to give an overall score.

The selection board will then draw up a list of candidates in the order of the overall scores awarded. The number of candidates (2) invited to the assessment tests will not exceed **three times** the number of successful candidates sought. This number will be published on EPSO's website (http://blogs.ec.europa.eu/eucareers.info/).

# 2. Verification of information given by candidates

Following the assessment tests and in the light of the results, EPSO will verify the information given by candidates in their online application for compliance with the general conditions on the basis of the supporting documents provided by candidates, while the selection board will do the same as regards the specific conditions and the criteria for selection. In assessing qualifications, supporting documents will be taken into account only to confirm the information already given under the 'Talent Screener' tab. If verification shows that the information given is not borne out by the appropriate supporting documents, candidates will be disqualified (3).

Applications will be verified for candidates with the highest aggregate marks, and at least pass marks, in assessment tests (d), (e), (f), and (g), in descending order. These candidates must also have obtained pass marks in the aptitude tests (a), (b), and (c). Verification will continue until the number of candidates who can be placed on the reserve list and who actually fulfil all the conditions for admission reaches the threshold. The files of candidates below the threshold will not be examined.

# V. OPEN COMPETITION

# 1. Invitation to the assessment tests

If you are one of the candidates (4)

 for whom the information given in your online application shows that you fulfil the general and specific conditions listed in Section III,

## and

— who obtained one of the highest points totals in the selection based on qualifications, you will be invited to attend an assessment tests which will normally take place in Brussels over the course of **one or two days** (5).

<sup>(2)</sup> Applicants who are not invited to the assessment tests will be sent the results of their assessment and the weighting applied to each question by the selection board.

<sup>(3)</sup> This information will be verified against the supporting documents before the reserve list is drawn up (see Section VI.1 and Section VII.2).

<sup>(\*)</sup> Where a number of candidates tie for the last available place, they will all be invited to the assessment tests.

<sup>(5)</sup> Depending on logistical constraints, the reasoning tests and written test (e) may be organised in test centres in the Member States and/or in Brussels, separately from the other assessment tests.

## 2. Assessment tests

Your competencies are assessed in three broad areas by means of the following tests:

- Reasoning ability: tests (a), (b) and (c)
- Specific competencies: tests (d) and (e)
- General competencies: tests (f) and (g)
  - your reasoning ability (6):
    - (a) a verbal reasoning test
    - (b) a numerical reasoning test
    - (c) an abstract reasoning test.
  - your specific competencies in the field:
    - (d) a structured interview on your competencies in the field, particularly based on the information provided in the 'Talent Screener' tab of your application
    - (e) a written test (6) (drafting a report)
  - your general competencies (7):
    - Analysis and problem-solving
    - Communicating
    - Delivering quality and results
    - Learning and development
    - Prioritising and organising
    - Resilience
    - Working with others

by means of:

- (f) a group exercise:
- (g) a structured interview on your general competencies.

These general competencies will be tested as shown in the following table:

	Group exercise (f)	Structured interview (g)
Analysis and problem-solving	x	
Communicating		x
Delivering quality and results		x
Learning and development	x	х
Prioritising and organising	x	х
Resilience	x	x
Working with others	x	x
Language of the tests  Language 1 for parts (a), (b) and (c)  Language 2 for parts (d), (e), (f) and (g)		

<sup>(6)</sup> The content of these three tests is approved by the selection board.
(7) More information on these competencies can be found in point 1.2 of the Guide to open competitions.

4. Marking	Reasoning ability
	(a) verbal: Marked out of 20
	Pass mark: 10
	(b) numerical: Marked out of 10
	(c) abstract: Marked out of 10
	Aggregate pass mark for tests (b) and (c): 10
	Tests (a), (b), and (c) are eliminatory; the marks are not added to the marks for the other assessment tests.
	Specific competencies
	Test (d): Marked out of 50
	Pass mark: 25
	Test (e): Marked out of 50
	Pass mark: 25
	Weighting: 65 % of the overall mark
	General competencies (tests (f) and (g))
	Each general competency will be marked out of 10.
	Pass mark:
	3 for each competency
	and
	an aggregate of 35 out of 70 for all 7 general competencies
	Weighting: 35 % of the overall mark

# VI. **RESERVE LISTS**

1. Reserve list	The selection board will place your name on the reserve list  — if you have obtained the specified pass marks and are one of the candidates with the highest aggregate marks in all the assessment tests (d), (e), (f) and (g) (see number of successful candidates sought, Section I.1) (*)  — and if your supporting documents show that you meet all the eligibility requirements.
2. Classification	Lists will be drawn up for each field and names will be listed in alphabetical order.

# VII. HOW TO APPLY

1. Online application	You must apply online, following the instructions on the EPSO website and particularly in the Online Application Manual.  Deadline (including validation): 22 January 2013 at 12 (midday), Brussels time.
2. Submission of application files	If you are one of the candidates invited to the assessment tests, you will have to bring with you your full application file (signed online application form and supporting documents) when you come to the assessment centre (*).  Procedure: see point 6.1 of the 'Guide to open competitions'.

<sup>(8)</sup> Where a number of candidates tie for the last available place, they will all be placed on the reserve list.
(9) You will be notified in good time of the date when you have to attend the assessment centre via your EPSO account.

## FIELD 1: BIOLOGY, LIFE AND HEALTH SCIENCES

# 1. Duties

Laboratory Technicians

The officials recruited will be expected to perform laboratory work/provide technical assistance in the ambit of biological, life and health science research.

Scientific laboratory technicians are responsible for laboratory-based tasks, which include sampling, testing, measuring, recording and analysing results in biology, life and health sciences. They also provide all the required technical support to enable the laboratory to function effectively whilst adhering to correct procedures and health and safety guidelines.

# 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

#### OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience form an integral part of the qualifications and cannot be counted towards the professional experience required below.

#### 3. Professional experience

At least three years' professional experience in the field of biology and life and health sciences.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

#### 4. Selection criteria

- 1. Professional experience in working in a life science laboratory.
- 2. Professional experience in working with chemical substances in glove-boxes.
- 3. Professional experience in specific life sciences measurement techniques (e.g. flow cytometry, spectrometry, chromatographic methods, PCR-based methodologies, etc.).
- 4. Professional experience in life sciences related quality systems such as ISO 17025, GLP.
- 5. Professional experience in electronic and optical microscopy.
- 6. Professional experience in mammalian cell culture work and working under sterile conditions.
- 7. Professional experience in drafting technical reports of experiment outcomes.
- 8. Professional experience in drafting technical documents for the maintenance of technical instrumentation in a life science laboratory.
- Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 10. Professional experience in following up activities carried out by contractors in order to verify their compliance to purchase orders/specifications.
- 11. Professional experience in verifying the adherence of the laboratory set up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.

#### FIELD 2: CHEMISTRY

## 1. Duties

Laboratory Technicians

The officials recruited will be expected to perform laboratory work/provide technical assistance in the ambit of chemical research.

Scientific laboratory technicians are responsible for laboratory-based tasks, which include sampling, testing, measuring, recording and analysing results in chemistry. They also provide all the required technical support to enable the laboratory to function effectively whilst adhering to correct procedures and health and safety guidelines.

# 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

#### OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience forms an integral part of the qualifications and cannot be counted towards the professional experience required below.

#### 3. Professional experience

At least three years' professional experience in the field of chemistry.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

#### 4. Selection criteria

- 1. Professional experience in general chemical laboratory techniques.
- 2. Professional experience in radiochemical laboratory techniques: handling of radioactive solutions in glove boxes and with manipulators in hot cells.
- 3. Professional experience in mass spectroscopy; combined laser ablation-MS techniques (ICP-MS & ICP-OES).
- 4. Professional experience in chromatographic separation and analytical techniques (GC, HPLC with various detectors, GC-MS, HPLC-MS, etc.).
- 5. Professional experience in wet chemical analysis and separation techniques and solvent separation techniques, i.e. solid-phase extraction, liquid-liquid distillation, accelerated solvent extraction, microwave, etc.
- Professional experience in electronic, optical microscopy and electron-optical surface analytical techniques (e.g. Auger, TIMS, Raman, FT-IR, fluorescence, UV).
- 7. Professional experience in validation of analytical methods and interlaboratory comparisons.
- 8. Professional experience
  - in defining simple experimental design for carrying out measurements,
  - in calibrating and carrying out maintenance of equipment for chemical laboratory activities, i.e. identification and quantification of chemicals in various matrices media, and
  - in carrying out chemical measurements following provided specifications.
- 9. Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 10. Professional experience in following up activities carried out by contractors and in carrying out acceptance tests in order to verify their compliance to purchase orders/specifications.
- 11. Professional experience in verifying the adherence of the laboratory set-up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.

#### FIELD 3: PHYSICS AND MATERIALS SCIENCE

## 1. Duties

Laboratory Technicians

The officials recruited will be expected to perform laboratory work/provide technical assistance in the ambit of physics and material sciences research.

Scientific laboratory technicians are responsible for laboratory-based tasks, which include sampling, testing, measuring, recording and analysing results in physics and material science. They also provide all the required technical support to enable the laboratory to function effectively whilst adhering to correct procedures and health and safety guidelines.

# 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

#### OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience form an integral part of the qualifications and cannot be counted towards the professional experience required below.

#### 3. Professional experience

At least three years' professional experience in the field of physics and materials science.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

#### 4. Selection criteria

- 1. Professional experience in general physics laboratory techniques.
- Professional experience in non-destructive testing techniques, i.e. metrology, visual inspection, ultrasound techniques, profilometry.
- 3. Professional experience in mass spectroscopy, vacuum technology, laser techniques and measurements.
- 4. Professional experience in high temperature materials and high temperature furnace technology, high temperature measurements, pyrometry.
- Professional experience in mechanical testing of materials: hardness, tensile or bend testing, fracture surface examinations.
- Professional experience in optical microscopy and electron-optical microscopy, electron-optical analysis techniques and surface-analytical techniques.
- 7. Professional experience in drafting technical reports of experiment outcomes.
- 8. Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 9. Professional experience in following up activities carried out by contractors in order to verify their compliance to purchase orders/specifications.
- 10. Professional experience in carrying out acceptance tests for purchased equipment.
- 11. Professional experience in verifying the adherence of the laboratory set-up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.

#### FIELD 4: NUCLEAR RESEARCH

# 1. Duties

Laboratory Technicians

The officials recruited will be expected to perform laboratory work/provide technical assistance in the ambit of nuclear research

Scientific laboratory technicians are responsible for laboratory-based tasks, which include sampling, testing, measuring, recording and analysing results in the nuclear research field. They also provide all the required technical support to enable the laboratory to function effectively whilst adhering to correct procedures and health and safety guidelines.

# 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

#### OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience form an integral part of the qualifications and cannot be counted towards the professional experience required below.

#### 3. Professional experience

At least three years' professional experience in the field of nuclear research.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

#### 4. Selection criteria

- 1. Professional experience in working in a nuclear laboratory and in radioprotection procedures.
- 2. Professional experience in working with radioactive materials in glove-boxes and in hot cells with manipulators.
- Professional experience in non-destructive testing techniques, i.e. metrology, visual inspection, ultrasound techniques, profilometry.
- 4. Professional experience in mass spectroscopy, gamma spectroscopy, beta/alpha spectroscopy, scanning/tomography techniques, vacuum technology, furnace technology.
- 5. Professional experience in containment and surveillance systems.
- 6. Professional experience in mechanical testing of materials: hardness, tensile or bend testing, fracture surface examinations.
- 7. Professional experience in optical microscopy and electron-optical microscopy & electron-optical analysis techniques, i.e. EDS, EMPA, SIMS.
- 8. Professional experience in drafting technical reports of experiment outcomes.
- 9. Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 10. Professional experience in following up activities carried out by contractors in order to verify their compliance to purchase orders/specifications.
- 11. Professional experience in verifying the adherence of the laboratory set-up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.

#### FIELD 5: CIVIL AND MECHANICAL ENGINEERING

## 1. Duties

Technicians

The officials recruited will be expected to provide technical assistance in the ambit of civil and mechanical engineering.

Technicians in the field of civil and mechanical engineering provide support by assisting engineers in the research and practical application of science, mathematical, mechanical and engineering principles to the design of building, constructions and mechanical equipment. They provide all the required technical support adhering to correct procedures and safety guidelines.

# 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

#### OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience form an integral part of the qualifications and cannot be counted towards the professional experience required below.

#### 3. Professional experience

At least three years' professional experience in the field of civil and mechanical engineering.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

#### 4. Selection criteria

- 1. Professional experience in manufacturing of mechanical components.
- 2. Professional experience in the design of mechanical components (with or without CAD-CAM solutions).
- 3. Professional experience in assembly and welding technologies.
- 4. Professional experience in working in a nuclear environment.
- 5. Professional experience in using/supervising machine-tools.
- 6. Professional experience in technical infrastructure design and specifications.
- 7. Professional experience in hydraulic or ventilation infrastructure system design and specifications.
- 8. Professional experience in the maintenance of mechanical installations in industrial plants.
- 9. Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 10. Professional experience in following up activities carried out by contractors and in carrying out acceptance tests in order to verify their compliance to purchase orders/specifications.
- 11. Professional experience in verifying the adherence of the laboratory set-up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.

#### FIELD 6: ELECTRICAL ENGINEERING AND ELECTRONICS

#### 1. Duties

Technicians

The officials recruited will be expected to provide technical assistance in the ambit of electrical engineering and electronics.

Technicians in the field of electrical engineering and electronics provide support by assisting engineers in the research and practical application of science, mathematical, mechanical and engineering principles to the design, development and installation of electric and electronic equipment. They provide all the required technical support adhering to correct procedures and safety guidelines.

#### 2. Qualifications

You must have completed a course of post-secondary education attested by a diploma relevant to the field concerned.

# OR

You must have a level of secondary education attested by a diploma giving access to post-secondary education, and at least three years' professional experience, of which two should be related to the field.

Note: These three years of professional experience form an integral part of the qualifications and cannot be counted towards the professional experience required below.

## 3. Professional experience

At least three years' professional experience in the field of electrical engineering and electronics.

Such professional experience is relevant only if acquired after the diploma giving access to the competition was obtained.

# 4. Selection criteria

- 1. Professional experience in electro technical/electronic laboratory techniques.
- 2. Professional experience in carrying out electrical/electronic measurements following provided specifications, i.e. data acquisition systems, specific instrumentation, remote control, data base management, computer skills.
- Professional experience in defining and implementing electrical/electronic circuits to cater for specific needs, i.e. specific measurements or logic functions, high or low voltage circuits, printed circuit boards, components mounting, circuit verification/debugging, programmable circuits FPGA CPLD, microprocessors.
- 4. Professional experience in setting-up electrical/electronic plan including programmable logic controller (PLC) and/or servo regulator, i.e. basic regulation and servo control concept, hardware installation, software implementation/verification, software languages.
- 5. Professional experience in maintaining electrical/electronic installations, i.e. maintenance organization and plan, maintenance verification, spares management.
- 6. Professional experience in performing equipment calibration in accordance with a pre-defined procedure and maintenance plan, i.e. calibration techniques, certification procedures and planning, ISO and IEC standards.
- Professional experience in drafting technical reports of experiment outcomes.
- 8. Professional experience in drafting technical specifications for purchase of laboratory material and in comparing different test equipment in order to select the most suitable ones for the needs of the laboratory.
- 9. Professional experience in following up activities carried out by contractors in order to verify their compliance to purchase orders/specifications.
- 10. Professional experience in carrying out acceptance tests for purchased equipment.
- 11. Professional experience in verifying the adherence of the laboratory set-up according to the applicable safety and security rules.
- 12. Professional experience related to any of the other competition fields.