

Research Assessment Committee

# CRITERIA FOR THE ISSUE OF RESEARCH ACCREDITATIONS

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Criteria approved by the Research Assessment Committee on 2 December 2021

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# **GENERAL CRITERIA**

#### Preface

AQU Catalunya is a signatory of the San Francisco Declaration on Research Assessment (DORA) and is aware of the recommendations proposed in the Leiden Manifesto and <u>supports it</u>.

The task entrusted to the CAR, which it undertakes by means of specific committees made up of experts in the respective fields, is to accredit whether the applicants satisfy a minimum threshold of quality and experience in research activities that, among other functions, allows them to take part in calls for applications at universities in the Catalan university system. In no case do the accreditations serve to assess the scientific activity itself, as a peer review, nor are they determining factors for obtaining an academic or research post in university selection processes, nor are they to establish rankings or listings of people or to award scholarships or research grants; all these tasks are the responsibility of the universities themselves or of other institutions, by means of the mechanisms they establish within the current legal framework.

Thus, the following criteria are aimed at establishing whether the research activity of the applicants reaches the necessary threshold to receive the corresponding accreditation. Given this nature of accreditation, specific commissions establish quantitative indicators and are guided in part by proxy indicators. However, direct indications of quality, such as citations received by publications or other indications of proven quality, will also be taken into account. As a general criterion, the CAR has considered for years that the quality contrasted and demonstrated by objective and accepted means within each field of knowledge prevails over the quantity of publications. With this objective, it is important that applicants highlight indicators of the direct objective quality of their contributions.

# FIELD OF HUMANITIES

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Humanities will assess the applicants' research activity carried out to date, their activity in research training, development, management and administration, and other merits in general. Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The basic assessment areas and the criteria for each one of them are as follows:

#### Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

#### Publications and transfer of research results

The originality, thematic variety and impact or international projection of the research carried out by the applicants are decisive aspects.

#### In books and chapters of books

In the case of books, the originality of the subject matter and/or methodology, the specific contribution of the applicant and publication by specialised or prestigious publishing houses will be taken into account.

The assessment of books and book chapters is broken down into three levels:

Level A:	International or national publisher of the highest quality, holding first-rate positions in the rankings of academic publishers in its discipline, such as Scholarly Publishers Indicators (SPI).
Level B:	International or national publisher of considerable quality, holding outstanding positions in the rankings of academic publishers in their discipline, such as Scholarly Publishers Indicators (SPI).
Level C:	International or national publisher of notable quality, based on objective evidence of quality within its field.

The Humanities Specific Committee will take into account the opinion of specialists and the quality assessment, which is based on a number of quality indicators, including number of citations, the applicant's particular contribution, reviews, inclusion in specialised bibliographies, impact and originality.

When an applicant is the editor of a collective book, the assessment will focus on their scientific contribution, the quality of the publication overall and the recognition of the publisher.

In the case of exhibition catalogues, texts will be taken into account provided that they are the result of specific research or represent an objective advancement in knowledge. In contrast, exhibition curatorship by itself is considered a transfer merit.

#### In journals

With respect to articles, value will be placed basically on publications in journals that that have undergone a peer-review assessment process and that appear in citation indexes —such as those of Clarivate Analytics (and particularly the Social Science Citation Index and the Arts and Humanities Citation Index) or Scopus— or in other specialised bibliographic databases of international prestige. In order to specify the effective repercussion of the research carried out by the applicant, consideration will be given whenever possible to the position of the journal in journal assessment repositories (which provide rankings by impact index or by other assessment criteria), and to the number of citations received by each article. Assessment will also be made of the degree of creativity, thematic diversity and innovation of the applicant's research and national or international projection will also be assessed.

The Humanities Specific Committee classifies article contributions on three levels of quality – A, B, C – which indicatively correspond to certain quartiles<sup>1</sup> of the journals in which the articles have been published, defined by international reference citation databases.

Level A:	A journal of international or national scope, of the highest level of quality within its discipline, which simultaneously fulfils the following conditions:
	1) the contributions undergo a rigorous peer review process and
	2) are present in at least two directories and databases such as: Web of Science (AHCI or JCR [Q1 or Q2], SCOPUS (Q1), CARHUS A, CIRCO A, or the classification of journals with the FECYT quality seal (Q1).
Level B:	International or national journal which simultaneously fulfils the following conditions:

<sup>&</sup>lt;sup>1</sup> When journals have a Journal Impact Factor (JIF), or other similar scientific impact indexing systems, the impact value of the year of publication of the article will prevail and, for articles published in the same year, the impact value closest to the closing date of the call to which the application has been submitted will prevail.

	1) the contributions undergo a rigorous peer review process and
	2) they are present in at least two directories and databases such as: Web of Science
	(AHCI or JCR [Q3 or Q4], SCOPUS (Q2 or Q3), CARHUS B, CIRC B, or the classification of
	journals with the FECYT quality seal (Q2).
Level C:	Journal of notable quality within its field, with a rigorous assessment system.

The Humanities Specific Committee will take into account the opinion of specialists and the quality assessment based on the citations received, the applicant's contribution (in the case of co-authorship), impact, originality, thematic diversity, rigour in the review process and the variety of journals in which it has been published, among other quality indicators. The Committee has prescribed that the assessment of an article will take precedence over that of the journal in which it is published when determining the corresponding level of quality (A, B or C) of an article submitted by a contributor.

Applicants must have at least ten contributions in the categories described above, at least four of which must be at level A or B, and of these four contributions, three must be published in international journals or by prestigious publishers. At least three contributions must have been published within the last 10 years.<sup>2</sup>

Deficiencies relating to quantity may be compensated by merits of very high or exceptional quality in the form of publications in which the applicant is the principal and corresponding author. The quality should be duly justified and proven by indicators and verified repercussion evidence<sup>3</sup> provided by the applicant.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations) will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

<sup>&</sup>lt;sup>2</sup> These are not required absolute minimums but rather a general reference in the field of Humanities which will be compared in each case with the average quality of the applicants' publications and the average productivity in the respective area.

<sup>&</sup>lt;sup>3</sup> The term 'repercussion evidence' is considered more precise than the term 'impact' since it allows consideration of other elements aside from the impact of journals (citations, reviews, influence index of journals or authors, etc.).

As regards the transfer of research results, activities that can be formally documented will be valued. In the case of technological applications, it will be assessed whether current use can be demonstrated by the applicant, or whether the applicant is sufficiently advanced in the procedure for international rights protection, so that the Committee can assess the real interest of the application.

## **Research projects**

Consideration will be given solely to the research projects financed within the frame of competitive grant programmes of both the public Administrations (International, European, State and Autonomous Regional) and the private sector (foundations, companies, etc.), assessing their results and their impact in the respective field. Value will be placed, particularly, depending on the area of specialisation, on the number and importance of the projects in which the applicant has participated. In this respect, it will be necessary for the applicant to have participated and contributed in at least one competitive research project. Value will also be placed on the degree of leadership and the initiative shown in generating new projects.

# **Training activity**

Value will be placed on applicants' capacity to form a research group or nucleus and on their having directed and/or currently directing doctoral theses. Value will also be placed on applicants' involvement in the teaching and/or co-ordination of post-graduate and Master's courses.

#### **Other merits**

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences and presentations at congresses, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses), reports issued by academics of acknowledged prestige, institutional activity in research promotion and management, etc. With regards to research stays, special value will be placed on the circumstance of their having been scientifically productive.

# Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	70%
2. Projects	15%
3. Training activity	7,5%
4. Other merits	7,5%

Each of the areas will be assessed on a scale of 10 points.

#### FIELD OF SOCIAL SCIENCES

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Social Sciences will assess the applicants' research activity carried out to date, their activity in research training, development, management and administration, and other merits in general. Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The basic assessment areas and the criteria for each one of them are as follows:

#### Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

#### Publications and transfer of research results

Value will be placed equally and jointly on the publications and the transfer of research results.

#### In journals

With respect to articles, value will be placed basically on publications in journals that have undergone a peer-review assessment process and that appear in citation indexes –such as those of Clarivate Analytics (in particular the Social Science Citation Index and the Arts and Humanities Citation Index) or Scopus– or in other specialised bibliographic databases of international prestige. In order to specify the effective repercussion of the research carried out by the applicant, consideration will be given whenever possible to the position of the journal in journal assessment repositories (which present rankings by impact index or by other assessment criteria), and to the number of citations received by each article. Assessment will also be made of the degree of creativity, thematic diversity and innovation of the applicant's research.

The committee dealing with Social Sciences agreed on a classification of submissions by candidates based on three levels of quality, A, B, and C, which also correspond to specific quartiles<sup>4</sup> used by journals in which articles have been published, defined according to international citation reference databases.

<sup>&</sup>lt;sup>4</sup> When a journal has a Journal Impact Factor (JIF), or other analogous systems for indexing scientific impact, the value for the impact in the year of the article's publication takes precedence, whereas for articles published the same year it is the value for the impact closest to the deadline of the call for applications to which the applicant has submitted a contribution. For the field of Law, use is made of CARHUS Plus latest edition.

Level A:	For all fields of knowledge: JCR Q1, JCR Q2; Scopus Q1 (SJR) For Law: CARHUS Plus+ A
Level B:	For all fields of knowledge: JCR Q3; Scopus Q2 (SJR) For Law: CARHUS Plus+ B
Level C:	For all fields of knowledge: JCR Q4; Scopus Q3 (SJR) For Law: CARHUS Plus+ C

The Committee may, where it considers appropriate, adjust the levels of quality in relation to a candidate's contribution in the case of scientific articles, beyond the location of a journal in a given quartile, bearing in mind various additional aspects, such as: the number of citations (e.g. Google Scholar), the number of authors and signature order, as well as the inclusion of journals from other citation indexes, repertories and specialised journal rankings<sup>5</sup>. The committee dealing with Social Sciences has prescribed that the assessment of an article will take precedence over that of the journal in which it is published when determining the corresponding level of quality (A, B or C) of an article submitted by a contributor.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations) will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

With regard to contributions in formats that are different to articles published in indexed journals, the committee assesses quality according to three levels (A, B, C) and, where applicable, taking into account the quality of the publishers through which monographs and book chapters are published, the number of citations, the number of authors and published reviews. The expert criteria of the reviewers, together with the information contained in listings and repertoires, such as Scholarly Publishers

<sup>&</sup>lt;sup>5</sup> In this context, for example, in Economics and Business, other systematic and comprehensive classifications and repertoires used by peer-review journals may be considered, with special reference to: the classification of reviews in the CNRS's Économie et en Gestion (Comité National de la Recherche Scientifique, France); VHB-Jourqual3, produced by the Verband der Hochschullehrer für Betriebswirtschaft (VHB, Germany); and the Academic Journal Guide, produced by the Association of Business Schools (ABS, UK).

Indicators, SENSE and others of international standing, will also be taken into consideration.

In this regard, the proposed minimum number of contributions required for an **accreditation of research** to be issued is as follows:

High quality contributions	Level of quality		
	"A"	"B"	"C"
10 (all of types A, B and C), where:	Minimum 5		Maximum 3

In other words, ten high quality contributions, with at least five "A" contributions, and no more than 3 "C" contributions.

Deficiencies relating to quantity may be compensated by merits of very high or exceptional quality in the form of publications in which the applicant is the principal and corresponding author. The quality should be duly justified and proven by indicators and verified repercussion evidence provided by the applicant.

With respect to the transfer of research results, value will be placed on those results for which either the fact that they are currently being used can be demonstrated by the applicant, or for which the process for the international protection of rights is sufficiently advanced in order that the Committee may assess the real interest of the application.

# **Research projects**

Consideration will be given solely to the research projects financed within the frame of competitive grant programmes of both the public Administrations (International, European, State, Autonomous Regional) and the private sector (foundations, companies, etc.), assessing their results and their impact in the respective field. Value will be placed, particularly, depending on the area of specialisation, on the number and importance of the projects in which the applicant has participated. In this respect, it will be necessary for the applicant to have participated in at least one competitive research project. Value will also be placed on the degree of leadership and the initiative shown in generating new projects.

# **Training activity**

Value will be placed on applicants' capacity to form a research group or nucleus and on their having directed and/or currently directing doctoral theses. Value will be placed on applicants' involvement in the teaching and/or co-ordination of post-graduate and Master's courses.

#### Other merits

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences at congresses or universities, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses), reports issued by professionals of acknowledged prestige, institutional activity in research promotion and management, etc. With respect to research stays, special value will be placed on the circumstance of their having been scientifically productive.

#### Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	70%
2. Projects	10%
3. Training activity	7,5%
4. Other merits	12,5%

Each of the areas will be assessed on a scale of 10 points.

# FIELD OF SCIENCES

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Sciences will assess the applicants' research activity carried out to date, their activity in research training, development, management and administration, and other merits in general. Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The basic assessment areas and the criteria for each one of them are as follows:

#### Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

## Publications and transfer of research results

Value will be placed equally and jointly on the publications and the transfer of research results.

With respect to articles, value will be placed basically on publications in journals that have undergone a peer-review assessment process and that appear in citation indexes such as the Science Citation Index Expanded. It is considered necessary that the total number of quality publications shall be about 15 or more.6

As a general principle, quality (demonstrated by objective internationally accepted parameters) will prevail over quantity. Specifically, deficiencies relating to quantity may be compensated by merits of very high or exceptional quality in the form of publications in which the applicant is the principal and corresponding author. The quality should be duly justified and proven by indicators and verified repercussion evidence provided by the applicant.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations)

<sup>&</sup>lt;sup>6</sup> These are not required absolute minimums but rather a general reference in the field of Sciences which will be compared in each case with the average quality of the applicants' publications and the average productivity in the respective area.

will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

In order to specify the effective repercussion of the research carried out by the applicant, consideration will be given whenever possible to the position of the journal in journal assessment repositories (such as the Journal Citation Reports) which present rankings by impact index, and to the number of citations received by each article.

When a substantial fraction of the research activity of the applicant has been carried out into a collaborative research model, the applicant should provide objective indicators of his or her personal contributions.

With respect to the publishing of books, special value will be placed on original books (where the applicant is the author and/or the editor of a multi-author book) published by specialised publishing houses of international prestige.

With respect to the transfer of research results, value will be placed on those results for which either the fact that they are currently being used can be demonstrated by the applicant, or for which the process for the international protection of rights is sufficiently advanced in order that the Committee may assess the real interest of the application.

# **Research projects**

Consideration will be given solely to the research projects funded within the framework of competitive grant programmes of both public administrations (International, European, State, Autonomous Regional) and the private sector (foundations, companies, etc.), with especially positive consideration being given to the applicants' participation as principal investigator of a project.

#### **Training activity**

Value will be placed on applicants' capacity to form a research group or nucleus and on their having directed and/or currently directing doctoral theses. Value will be placed on applicants' involvement in the teaching and/or co-ordination of post-graduate and Master's courses.

#### Other merits

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences at congresses or universities, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses), reports issued by academics of acknowledged prestige, institutional activity in research promotion and management, etc. With respect to research stays,

special value will be placed on the circumstance of their having been scientifically productive.

# Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	75%
2. Projects	10%
3. Training activity	10%
4. Other merits	5%

Each of the areas will be assessed on a scale of 10 points.

# FIELD OF LIFE SCIENCES

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Life Sciences will assess the applicants' research to date as well as other merits of research management and administration. Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The assessment criteria and areas are as follows:

#### Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

## Publications and transfer of research results

Value will be placed equally and jointly on the publications and the transfer of research results.

With respect to articles, value will be placed basically on publications in journals that have undergone a peer-review assessment process and that appear in citation indexes such as the Science Citation Index Expanded. The number of publications necessary will be about 20 or more.<sup>7</sup>

Special value will be placed on the circumstance of about 10 of the publications belonging to the first quartile of the respective category of the Journal Citation Reports, and on the applicant's being the corresponding author or first or last signatory<sup>8</sup> of 50% of them (five). Exceptionally, the Committee may place value on articles in other quartiles. As a general principle, quality demonstrated by objective internationally accepted parameters, will prevail over quantity, as long as the applicant is the first author, last author or corresponding author.

No consideration will be given to reviews, purely descriptive works and reiterations of previous work, except in cases where a significant contribution is/has been made to the consolidation and advancement of knowledge in the respective field.

In order to specify the effective repercussion of the research carried out by the applicant, whenever possible, consideration will be given to the percentage of distribution by quartiles of the Journal Citation Reports where the applicant's articles appear and to the number of citations received for each article, as evidence of the

<sup>&</sup>lt;sup>7</sup> These numbers are not intended as required minimums, but rather as recommendations. In the event that the applicant does not reach this threshold, the rest of contributions will be considered.

<sup>&</sup>lt;sup>8</sup> See note 6.

repercussion of the applicant's research. Assessment will also be made of the degree of creativity, thematic diversity and innovation of the research.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations) will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

With respect to the publishing of books, special value will be placed on those of original character (when the applicant is the author and/or the editor of a multi-author book) published by specialised publishing houses, placing greater value, if appropriate, on the books published by publishing houses of international prestige.

With respect to the transfer of research results, value will be placed on those results for which either the fact that they are currently being used can be demonstrated by the applicant, or for which the process for the international protection of rights is sufficiently advanced in order that the Committee may assess the real interest of the application.

# **Research projects**

Consideration will be given solely to the research projects financed within the frame of competitive grant programmes of both the public Administrations (International, European, State, Autonomous Regional) and the private sector (foundations, companies, etc.). Consequently, non-competitive grants, of contractual nature, are excluded. Value will be placed, particularly, depending on the area of specialisation, on the number and importance of the projects of which the applicant has been the principal investigator (PI). The applicant shall have been the PI in one research project that is, if possible, currently under way. Assessment will also be made of the capacity to obtain resources, the degree of leadership, and the initiative shown in generating new projects.

# **Training activity**

Value will be placed on the applicants' capacity to form a research group or nucleus and on their having directed and/or currently directing doctoral theses. Value will also be placed on applicants' involvement in the teaching and/or co-ordination of postgraduate and Master's courses.

#### Other merits

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences at congresses or universities, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses), reports issued by academics of acknowledged prestige, institutional activity in research promotion and management, etc. With respect to research stays, special value will be placed on the circumstance of their having been scientifically productive.

#### Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	70%
2. Projects	15%
3. Training activity	10%
4. Other merits	5%

Each of the areas will be assessed on a scale of 10 points.

#### FIELD OF MEDICAL AND HEALTH SCIENCES

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Medical and Health Sciences will assess the applicants' research to date as well as other merits of research management and administration. Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The assessment criteria and areas are as follows:

## Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

## Publications and transfer of research results

Value will be placed equally and jointly on the publications and the transfer of research results.

With respect to articles, value will be placed basically on original articles in journals which have undergone a peer-review assessment process and which appear in citation indexes such as the Science Citation Index Expanded. The minimum number of publications should be about 20 or more.<sup>9</sup> Special value will be placed on the circumstance of about 10 of the publications belonging to the first quartile of the respective category of the Journal Citation Reports and on the applicant's being the first author, last author or corresponding author of 5 of them.<sup>10</sup> In this respect, and even if they are published in media of recognised value, clinical cases, publications that do not have a minimum length, which do not make an original contribution to knowledge or have not had a significant impact on the scientific community, such as notes or discussion of other articles, will not be considered.

In order to specify the effective repercussion of the research carried out by the applicant, consideration will be given whenever possible to the percentage of distribution by quartiles of the Journal Citation Reports where the applicant's articles

<sup>&</sup>lt;sup>9</sup> These numbers are not intended as required minimums, but rather as recommendations. In the event that the applicant does not reach this threshold, the rest of contributions will be considered.

<sup>&</sup>lt;sup>10</sup> See Note 8.

appear and to the number of citations received for each article, as evidence of the repercussion of the applicant's research.

In the case of distinctive subject areas that are identified as such by the Committee, due to their explicit emerging or multidisciplinary nature, the classification in quartiles generated *ad hoc* with data of the Journal Citation Reports based on the selection of titles which the Committee considers to be representative of the specific area of knowledge will be used.

As a general principle, quality, demonstrated by objective internationally accepted parameters, will prevail over quantity, as long as the applicant is the first author, last author or corresponding author.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations) will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

Special value will be placed on those of original character (when the applicant is the author and/or the editor of a multi-author book) published by specialised publishing houses, placing greater value, if appropriate, on the books published by publishing houses of international prestige.

With respect to the transfer of research results, value will be placed on those results for which either the fact that they are currently being used can be demonstrated by the applicant, or for which the process for the international protection of rights is sufficiently advanced in order that the Committee may assess the real interest of the application.

# **Research projects**

Consideration will be given solely to the research projects financed within the frame of competitive grant programmes of both the public Administrations (International, European, State, Autonomous Regional) and the private sector (foundations, companies, etc.). Consequently, non-competitive grants, of contractual nature, are excluded. Value will be placed, particularly, depending on the area of specialisation, on the number and importance of the projects of which the applicant has been the principal investigator (PI).

The applicant should have been the PI in a competitive research project, if possible in progress. Value will also be placed on the capacity to raise funds, the degree of leadership, and the initiative in generating new projects.

# **Training activity**

Value will be placed on the applicants' capacity to form a research group or nucleus and on their having directed and/or currently directing doctoral theses. Value will also be placed on applicants' involvement in the teaching and/or co-ordination of postgraduate and Master's courses.

# Other merits

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences at congresses or universities, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses), reports issued by academics of acknowledged prestige, institutional activity in research promotion and management, etc. With respect to research stays, special value will be placed on the circumstance of their having been scientifically productive.

#### Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	70%
2. Projects	15%
3. Training activity	10%
4. Other merits	5%

Each of the areas will be assessed on a scale of 10 points.

## Specific considerations for the particular fields<sup>11</sup> of Nursing and Physiotherapy

Although conceptually the above criteria are applicable to the fields of Nursing and Physiotherapy, given the characteristics that differentiate them from other areas, the following specific aspects will be taken into account:

<sup>&</sup>lt;sup>11</sup> In the session held on 20 November 2019, and for a period of 3 years, the Research Assessment Committee agreed on the term particular field to refer to Nursing and Physiotherapy.

#### Publications and transfer of research results

With respect to articles, primary value will be placed on original articles in journals having undergone a peer-review process and appearing in citation indexes such as the Science Citation Index Expanded. The approximate minimum number of publications must be 15 or more. Special value will be placed on having around 7 of such publications in the first quartile of the corresponding category of the Journal Citation Reports and on the applicant's being the corresponding author or the first signatory of 3 of them. In this respect, and even if they are published in media of recognised value, clinical cases, publications corresponding to conference papers, letters to the editor and all those contributions that do not have a minimum length, which do not make an original contribution to knowledge or have not had a significant impact on the scientific community, such as notes or discussion of other articles, will not be considered.

#### **Research projects**

Consideration will be given solely to research projects funded within the frame of competitive grant programmes run by public administrations (international, European, state or autonomous regional) or by actors in the private sector (foundations, companies, etc.). Consequently, non-competitive grants of a contractual nature are excluded. Particular value will be placed on the number and importance of the projects of which the applicant has been the principal investigator (PI), depending on the area of specialisation.

Applicants should have been IP on a competitive research project, current if possible, or have participated in 5 projects.

#### **Training activity**

The applicant's ability to form a research group or nucleus and whether they are supervising or have supervised Master's theses (TFM) will be assessed.

#### FIELD OF ENGINEERING AND ARCHITECTURE

For the issue of research accreditation, the Specific Committee for the Accreditation of Research in the Field of Engineering and Architecture will assess the applicants' research to date as well as other merits of research management and administration.

In the field of Architecture, assessment will also be made of the international recognitions of the applicants' work, their recognised prizes, the circumstance of their having been published, and the circumstance of their having acted as curators of exhibitions.

Consideration will be given to the temporality of the scientific task carried out and, especially, to the applicants' career in recent years. The assessment criteria and areas are as follows:

## Scientific career

Applicants shall demonstrate a proven teaching and research capacity, in accordance with Section 46 of Act 1/2003, dated 19th February, on universities of Catalonia. With respect to research capacity, applicants shall demonstrate, as a minimum, three years of post-doctoral research activity in order to be accredited.

#### Publications and transfer of research results

Value will be placed equally and jointly on the publications and the transfer of research results.

In the areas of specialisation in which there are indicators admitted by the academic, scientific and professional community, such indicators will be used. Otherwise, consideration will be given to the criteria of originality, significance, quality and repercussion of the work.

As an indicator of the dissemination and impact of the publications in journals, it will be verified that they are indexed in the thematic categories pertaining to the areas of Engineering and Architecture of the citation indexes Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI) and Arts and Humanities Citation Index (AHCI). In the case of journals indexed in SCIE and SSCI, the information appearing in the Journal Citation Reports (JCR) allows classification of the titles in quartiles according to their relative volume of citation, which is considered another quality indicator of the medium in which they are published.

In the assessment process, a guideline indicator of an acceptable level of scientific and technical publications is the authorship of eight contributions of quality and articles published in journals of recognised standing. In the case of the latter (published articles), only articles that appear in the listings of the subject areas of the JCR that correspond to the applicant's specialised field are considered.

This is not an absolute number but rather a general reference. Additionally, value will be placed on the circumstance of more than half of the publications belonging to the first quartile of the respective area and on the applicant's being the first signatory or principal investigator.

As a general principle, quality (demonstrated by objective internationally accepted parameters) will prevail over quantity. Specifically, deficiencies relating to quantity may be compensated by merits of very high or exceptional quality in the form publications in which the applicant is the principal and corresponding author. The quality should be duly justified and proven by indicators and verified repercussion evidence provided by the applicant. Moreover, in order to specify the effective repercussion of the research carried out by the applicant, consideration will be given whenever possible to the number of citations received. Consideration may also be given to the patents in operation.

As a general rule, publications in journals or publishing houses whose processes of acceptance and review of originals are deficient in the justified opinion of the experts of the corresponding specific committee, regardless of the position of the journal or publishing house in the bibliometric rankings, are not considered to be quality contributions. In this respect, papers published in journals which have practices that compromise their quality (such as editorial deadlines that are too short to guarantee the quality of the review and an unjustifiably high volume of articles or self-citations) will be treated as non-indexed publications, unless they are accompanied by sufficient evidence of quality.

The proceedings of congresses published with ISSN will not be considered publications in journals, even if they are indexed in SCIE, SSCI or AHCI. Such congress proceedings, the same as those referenced in databases such as the Conference Proceedings Citation Index of Clarivate Analytics and similar ones, will have only a complementary consideration with respect to the publications in indexed journals. In the field of Information and Communication Technologies, however, the communication of referenced works in high ranking positions on the GGS (GII-GRIN-SCIE http://gii-grin-scie-rating.scie.es/) may be taken into consideration.

With respect to the publication of books, value will be placed especially on those of original character (where the applicant is the author or co-author and/or the editor of a multi-author book, excluding the publication of proceedings of congresses) published by specialised publishing houses, placing greater value, if appropriate, on those published by publishing houses of international prestige.

#### **Research projects**

Consideration will be given solely to the research projects financed within the frame of competitive grant programmes of both the public Administrations (International, European, State, Autonomous Regional) and the private sector (foundations,

companies, etc.). It will be necessary for the applicant to have directed or participated in research projects approved in public competitive grant programmes, especially those financed in national or international programmes. Only in special highly justified cases may this condition be compensated by others of significant merit. The importance of the projects will be assessed by their financial value and by the publications in journals and the patents that they have generated. Assessment will also be made of the capacity to obtain resources, the degree of leadership, and the initiative shown in generating new projects.

# **Training activity**

Value will be placed on the applicant's capacity to form a research group or nucleus and to contribute actively to the training of researchers. Assessment will also be made of the doctoral theses that the applicants have directed and their involvement in the teaching and/or co-ordination of post-graduate and Master's courses.

## Other merits

The Committee will assess all the other merits that the applicants submit, such as research prizes or awards, acknowledged stages of research, guest conferences at congresses or universities, research stays, positions of scientific responsibility (editorial committees, international and national scientific committees, organisation/chairing of congresses, publication of proceedings of congresses), reports issued by academics of acknowledged prestige, institutional activity in research promotion and management, etc. Research stays at centres of international prestige will be assessed whenever they have been for a length of over one month, during both the pre-doctoral and post-doctoral periods, and represent a significant contribution to the applicant's training or specialisation as a researcher.

#### Weighting of each area

The weighting of each area in the final score will be as follows:

1. Publications and transfer of research results	70%
2. Projects	15%
3. Training activity	10%
4. Other merits	5%

Each of the areas will be assessed on a scale of 10 points.

# Specific considerations for the field of architecture

While the foregoing criteria are applicable, from the conceptual standpoint, in the field of Architecture, the following specific aspects will be taken into account because of the characteristics that distinguish Architecture from Engineering:

It must be understood that, with respect to **Publications**, measurement is made of the incidence of a researcher's activity on the experts in an area. In this respect, the closest parallel in the field of Architecture would be the capacity of a thoughtful professional to contribute, with his or her contributions, to the advance and shaping of knowledge. To the extent that these contributions sketch out some precise guidelines, are the object of a reflexive conceptualisation and have an influence on the evolution of the world of Architecture, they may be assessed as publications. The transfer of research results contributed by the applicant will also be assessed in this area.

Within the **Projects** area, measurement is made of the capacity to define objectives, establish the strategies necessary to achieve them, and mobilise the pertinent human resources. On the basis of this principle, the acceptance of projects may be broadened in the field of Architecture to include more diverse activities, as long as they present the three aforementioned aspects and are of an entity comparable to that described in the area of **Research Projects**.

The area of **Other Merits** may include significant aspects of the field of Architecture that are without parallel in other fields. In the absence of more objective measures, architects are accustomed to, and find completely acceptable, assessment by all types of panels and juries. The placement of their effort in the hands of a group of prestigious professionals is the usual way of obtaining commissions, winning competitive biddings, participating in exhibitions or having their works published. For this reason, in this area, all these formulas of competition and jury must be included, with a change in the weightings set out above.

Consequently, in the field of Architecture, the following weighting of merits will be applied:

1. Publications and transfer of research results	50%
2. Projects	10%
3. Training activity	20%
4. Other merits	20%

Each of the areas will continue to be assessed on a scale of 10 points.

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