Accounting system of PhD activities

The system which regulates the accounting modalities of academic and research activities applies to both training activities inside Politecnico, publications and external activities. For each of those aspects of the PhD career, the Board of the Doctoral School fixed a score to be totalised by the end of third year.

In order to helping with the accounting process, a platform (called "*cruscotto*") has been created. The "cruscotto" is available at the student page ("*Portale della didattica*"), and it is essential that constantly updating all information here.

TRAINING ACTIVITIES

The Training Activities indicator sums up the number of hours of technical and specialised courses (hard skills) attended, whose minimum number shall be 100 hours, and the hours of transversal courses (soft skills) attended, whose minimum number shall be 40 hours. **The Committees of the different doctoral programs can set higher requirements for the hours of hard skills; please refer to the deliberations of your doctoral program.** The indicator D depends on two factors: the number of hours of course H and the grade obtained for that course E. For each of the courses not included in the Politecnico catalogue (courses, Summers Schools, workshops) a maximum of 30 hours can be validated.

Transversal courses (soft skills) D_{soft}:

Transversal courses offered by Politecnico can be found here:
http://dottorato.polito.it/en/courses_on_transferable_skills.
Some of them are offered as e-learning courses. To be able to attend them you should:

- Upload the course in your personal study plan.
- Watch all of the video lessons following the order in which they appear accessing your student page ("*Portale della Didattica*") – section: "ScuDo – e-learning courses".
- Access the final test. Only one wrong answer is permitted but the test may be repeated. Positive evaluation: PASS
- The positive result will be registered in your electronic transcript.

Transversal courses attended outside Politecnico have to be approved beforehand by the Commission for transversal education. A maximum of 30 hours can be accounted for each course. If the course does not foresee any final evaluation, the number of accounted hours is divided by two (H = hours/2).

Foreign language courses and the ones offered by professional associations are not accountable as transversal courses for doctoral candidates.

Training Activities Indicator: $D = D_{hard} + D_{soft}$

$$D_{hard} = \sum_{i^{th}\ course} H_{h_i} \cdot E_i$$

$H_{h_i} = total\ n°\ of\ classes\ hours$
- PhD course: H_h
- M.Sc. course: $\dfrac{H_h}{2}$
- B.Sc. course: $\dfrac{H_h}{3}$

$E_i =$
- $\dfrac{4}{3}$ if grade: PASS
- $\dfrac{5}{3}$ if grade: PASS WITH MERIT
- 1 if: course not offered by PoliTo w/o exam, just certificate of attendance

Min requirement:
$$\sum_{i^{th}\ course} H_{h_i} \geq 100$$

$$D_{soft} = \sum_{i^{th}\ course} H_{s_i} \cdot E_i$$

$H_{s_i} = total\ n°\ of\ classes\ hours$
- course not offered by PoliTo
  w/o exam: $\dfrac{H_{s_{ouside}}}{2}$
  ➤ $H_{s_{outside}}$: max 30 h
- other cases: H_s

$E_i =$
- $\dfrac{4}{3}$ if grade: PASS
- $\dfrac{5}{3}$ if grade: PASS WITH MERIT
- 1 if: course not offered by PoliTo, w/o exam, just certificate of attendance

Min requirement:
$$\sum_{i^{th}\ course} H_{s_i} \geq 40$$

Note:

D1. Equivalence of grades (expressed in a scale of 30) for the attribution of the value of E: grades between 18 and 25 will be converted into "pass"; grades between 26 and 30L will be converted into "pass with merit"

D2. In case of courses not belonging to Politecnico, the corresponding E will be considered if the Doctoral student can produce a certificate of attendance with the respective grade. In case of voting scales not covered in this document, it is up to the Coordinator to estimate whether the value of E is 4/3, or 5/3; if the student can produce only a certificate of attendance E = 1 will be assigned, as above specified. The Coordinator decides also on the level of the course (I, II or III level course), if needed.

D3. Please notice that the minimum requirements for D_{hard} e D_{soft} are defined on the number of lessons hours (possibly reduced to one-half or one-third for level I or level II courses, respectively), without the consideration of the factor E.

PUBLICATIONS

The Research Activities Indicator **R** is calculated on the basis of the number N of articles published in:

- journals listed in the international databases "Scopus" and "Web of Science", for bibliometric sectors;
- publications on books with ISBN (or ISMN) and journals with ISSN in ANVUR list for its SSD, for non bibliometric sectors.

The definition of international DBs such as "Scopus" and "Web of Science," ISSN, ISBN e ISM is in compliance with art. 1 of Ministerial Decree No. 602 of July 29, 2016 on the national scientific habilitation; in order to identify the bibliometric sector each PhD Candidate is appointed for the disciplinary-scientific sector of his/her supervisor, Annex C of Ministerial Decree No. 120 of June 7, 2016 does not apply.

The Research Activities Indicator **R** is calculated also on the basis of:

- Value P of the publication determined according to the University system for bibliometric evaluation issued with Rector Notice prot. n. 3438. II.1 of 03.13.2014 and published on
  https://didattica.polito.it/zxd/cms_data/attachment/30/Criteri_bibliometrici.pdf;
- Degree of ownership f.

$$R = 50\, N + \alpha\, \Sigma_{\text{pubblicazioni}}\, (P_i\, f_i)$$

- N is the number of ARTICLES PUBLISHED IN JOURNALS approved;
- P_i is the value of the publication according to the University system for bibliometric evaluation (integrated with the criterion $P=0{,}5$ for papers published in international refereed conferences)
- f_i is the degree of ownership, as described in the University system for bibliometric evaluation
- $\alpha \geq 10$

The minimum requirements for the research activity are **N ≥ 1** and **R ≥ 50.**

The indicator **R** sums up two terms, the first measures the number of articles published in journals recognized, the second one quantifies the quality of the publication and the individual contribution of the PhD candidate.

Note:

R1. Politecnico is subscribed to Scopus services, available at the link: https://www.scopus.com/search/form.uri?display=basic, and to Web of Science services, available at the link:

R2. *N* is the number of **articles** published solely in journals approved (even in the fourth quartile). The number of co-authors does not affect the calculation of N (unless they are authored by multiple PhD candidates of Politecnico, cfr. note R3), it affects the degree of ownership (cfr. note R9).

R3. If more than one PhD candidate is classified as co-author, *N* is calculated proportionally to their number (i.e. 1 article with 3 PhD candidates as co-authors: 1/3 of the total value of the article will be awarded to each PhD candidate). The *rationale* is that doctoral candidates should produce, during their PhD, at least the equivalent of a paper in a journal approved. The status of "PhD candidate" is verified at the date of publication.

R4. α is a coefficient with a value ≥ 10; each PhD programme has the freedom to determine the value of α for their candidates. The value of α is displayed in the section "Ricerca" of "cruscotto" platform (see the page "Dettaglio studente").

R5. The weight of coefficient P_i for articles published in journals is calculated according the bibliometric criteria of Politecnico (cfr. attached below).

Bibliometric Criteria for the evaluation of the scientific production
Evaluation of Journal articles - Departments of Engineering

POLITECNICO
DI TORINO

For the Departments of Engineering, it is to be considered articles published in journals listed in international databases ISI and Scopus, with the following specifications:

- To assign a score to journal articles with Impact Factor (ISI-JCR) and/or with index SJR (Scimago Journal Rank for SCOPUS), according to the quartiles ISI/Scimago.

- Not all journals ISI are included in JCR or Scimago: journals without IF/SJR or not listed in ISI/Scopus are included in those of class D with a score of 0.

- If the journal belongs to multiple Subject Category, the highest classification has to be considered; the same is true for journals listed on both databases.

- The class of the journal is the publication year of the article (if this data is not available will be used the last classification available).

Product Class	Score
A (1° quartile)	1
B (2° quartile)	0,8
C (3° quartile)	0,5
D (4° quartile or journals not surveyed)	0

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Bibliometric Criteria for the evaluation of the scientific production
Evaluation of Journal articles - Departments of Architecture

POLITECNICO
DI TORINO

For the Departments of Architecture, it is to be considered articles published in journals surveyed by ANVUR for the ASN and VQR and in journals listed in the international databases ISI and Scopus, with the following specifications:

- Those articles published in journals included in the list of "journals Class A" defined by ANVUR for ASN, shall be classified as class «A»

- Those articles published in journals included in the list of "scientific journals", published by ANVUR for ASN (in which is not available subdivision of classes), shall be classified as class B/C

- Those articles published in journals ISI/Scopus shall be classified as belonging to the highest class among those indicated in JCR of ISI and/or SJR - Scimago Journal Rank SCOPUS and those applicable to journals on the lists ANVUR (A or B/C).

- Articles published in journals not included in the lists of the ASN but comprised in the list of journals made by GEV 8 of ANVUR for VQR, shall be classified as class B/C

Product Class	Score
A (list «A» ASN o 1° quartile ISI/Scopus)	1
B/C (list ASN, list VQR o 2° and 3° quartile ISI/Scopus)	0,65
D (journals not surveyed in any list or 4° quartile ISI/Scopus or without IF)	0

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- The score of book chapters is linked to the book itself, but takes into account the number of pages (the author must make available the same information as required for the evaluation of books as well as for the book referenced chapter).

- The sum of the scores of the chapters by the same author in the same book (same ISBN or equivalent) won't be more than one third of the maximum score attributed to the book. For the evaluation of the departmental structures, the sum of the scores of chapters by authors from the same department and book, shall not be more than one third of the maximum score attributed to the book.

Criteria	Score
Chapters > = 10 pages	0.25* score book
Chapters 4- 9 pages	0.10* score book
Chapters 2-3 pages	0.02* score book

R7. Due to the difficulty of determining the "score book" as defined by the bibliometric criteria, the Board of the Doctoral School has fixed a conventional score of 5 for each book; this allows to determine the points for the chapters (see the note R6).

R8. In addition to P_i values defined by bibliometric criteria (cfr. notes R5 and R6), the Board of the School decided to allocate also 0,5 points for each paper presented at international conferences with referees. These items, however, do not contribute to

the determination of N. The definition of "international conference with referees" is detected from the description of the article in the IRIS database: it is therefore essential that the item is entered in IRIS with all database fields duly filled.

R9. f_i is the degree of ownership shared by each of the co-authors of the publication, on the basis of the University bibliometric criteria, as illustrated below.

Bibliometric Criteria for the evaluation of the scientific production
Degree of ownership

POLITECNICO DI TORINO

Individual evaluation of teachers and researchers:

$$\text{Factor} = \left(\frac{1}{n}\right)^{\frac{n-1}{n}}$$

$n =$ Authors number

$n > 10 \rightarrow$ Factor $= 0,1$

EXTERNAL RESEARCH ACTIVITIES

The External Research Activities Indicator R sums up the days of research activities carried out externally to Politecnico or outside the official working place. For this indicator, no minimum requirement is set.

$$R^e = {}^d\!/_5$$

d is the number of calendar days spent at the external work place/s

In order to always have an updated value of this indicator, it is important to fill the "cruscotto" with all the details related to the external research activity (i.e. title of the activity, work place, duration and institution); the relevant section of the "*cruscotto*" platform is "*Attività fuori sede*". The candidates shall fill in all the information on their activities in the appropriate form, before the departure, and the coordinator shall approve. When the PhD candidate returns to Politecnico, he/she shall upload a report on the activity carried out, duly countersigned by the person he/she had worked with. The Coordinator shall then validate it, if satisfactory.

You are invited to upload in this section all the external research activities carried out throughout the three years of your PhD career.