The International Engineering Educator Registry: Rubrics and Tool Used to Assess Registration Readiness and Professional Achievement

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Abstract

The ENTER initiative is an international effort funded by the European Commission to certify and register the qualifications of engineering educators. The ENTER certification is important for professionals who wish to demonstrate their qualifications in the field of engineering education. The paper presents a simulation tool that allows potential candidates to evaluate their qualifications and experience to determine if they are eligible to become a registered professional engineering professor in ENTER. The simulation tool uses a set of rubrics and an online questionnaire of 33 questions grouped under five different aspects to estimate the applicant's credentials. If the simulation shows that the user qualifies to be registered, they can then complete the application process and submit a fully documented portfolio for review by three registered experts from the Monitoring Committee. If approved, the professor would then be registered and qualified to use the tile iPEER (International Professional Engineering Educator Register), and all their ENTER-certified professional training can be verified online. The paper also discusses the technical aspects of meeting the security and privacy requirements of ENTER. ENTER is the only professional regulating body recognized to regulate the International Standard Classification of Occupations ISCO - 2311 Engineering Educator profession. The initiative has been successful, with almost 2000 professors from 42 countries registered since November 2023, and over 4000 in the process. The goal of the paper is to increase the transparency on the review process and to encourage more Engineering Educators to complete the registration process in ENTER.

Keywords

Engineering educator, professional registry, rubrics, ENTER.

Introduction

In the past 20 years there has been a call for change in Engineering Education to prepare engineers to face global challenges and a fast-changing world. The Engineering Deans Council and Corporate Roundtable of the American Society of Engineering Education (ASEE) issued in 1994 the ASEE Green Report [1] detailing an action plan that focused on partnership to make engineering education more than teaching the fundamentals of engineering theory, experimentation and practice but also make it relevant, attractive. and connected. In 1995 the National Research Council (NRC) Board of Engineering Education Report [2] led to the ABET EC2000 [3] transformation in the engineering curriculum moving to competencies and outcomes.

The American Board of Engineering and Technology (ABET) Engineering Criterion 3 outlines the student outcomes expected of graduates from an accredited engineering program [3]. These outcomes include the ability to identify, formulate, and solve complex engineering problems; apply engineering design to produce solutions that consider public health, safety, welfare, and various global, cultural, social, environmental, and economic factors; effectively communicate with various audiences; recognize ethical and professional responsibilities and make informed judgments; function effectively in a team setting and provide leadership, establish goals, plan tasks, and meet objectives; develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions; and acquire and apply new knowledge using appropriate learning strategies. Some engineering disciplines incorporated additional outcomes. Accreditation by ABET ensures that a program has met these standards and prepares graduates for professional practice.

Subsequently, a myriad of publications all urged the Engineering Education Profession to consider not only pedagogical changes and competencies, but also focus on soft skills, globalization, global impact and doing rigorous engineering education research. These included: three reports in 2002 by the International Engineering Consortium (IEC) that called for *Engineering Education Reform* [4]; the National Academy of Engineering (NAE) studies in 2004 on *The Engineer of 2020* [5], and in 2005 *Educating the Engineer of 2020* [6], *Rising Above the Gathering Storm* [7] and *Meeting the Challenge of a Global Economy* [8]; the U.S. Council on Competitiveness' *The National Innovation Initiative* 2005 [9]; the National Science Foundation's (NSF) 2007 *Moving Forward to Improve Engineering Educatio*n [10]; Carnegie Foundation for the Advancement of Teaching 2008 report on *Educating Engineers* [11].

In 2010, five years after publishing *Rising Above the Gathering Storm, Revisited,* the NAE characterized the urgency of adopting the recommendations as a Category 5 storm [12]. In 2020 the pandemic forced closures of schools for an extended period, and the entire teaching profession faced the need to abruptly change their teaching paradigm to convert to online teaching.

The availability of resources for engineering faculty professional development has grown but not enough to meet the needs of the Engineering Educator Professional. Several master's and PhD programs have been created, but most engineering faculty members do

not take pedagogical courses. The National Effective Teaching Institute (NETI) has been offering workshops for engineering faculty since 1991, impacting over 2800 participants from 365 institutions in the United States [13]. The Indo-Universal Collaboration for Engineering Education (IUCEE) was launched to design and deliver a scalable engineering faculty development program, and it now has 19 Teaching and Learning Centers globally [14]. The International Society for Engineering Pedagogy (IGIP, from its name in German: Internationale Gesellschaft für Ingenieurpedagogik) [15] offers a prototype curriculum for the Ing.Paed.IGIP title, identifying the awarding the competencies required of the Engineering educator (or Engineering Pedagogist). The IGIP competencies include evaluation management, development of competencies, communication skills, teamwork, ethics, and intercultural competencies. However, all these entities need a previous diagnosis of the competences the engineering teacher lacks. ENTER [16] has finally provided that as a mandatory requirement for professional credentialing.

The pandemic has resulted in students having learning gaps and mental challenges that educators must learn to address [17, 18]. Additional resources are clearly needed to create a global standard of the competencies required by the International Professional Engineering Educator; the term that ENTER uses to identify a professional that teaches Engineering students in Higher Education [19].

ENTER Registry and the iPEER Credential

A need was identified to gather experts and stakeholders to develop international standards to guide the formation of the Engineering Educator Professional and verify an individual's credentials. The EngineeriNg educaTors pEdagogical tRaining (ENTER) [16] is an international initiative funded by the European Commission. ENTER is the only professional regulating body recognized to regulate the International Standard Classification of Occupations ISCO-2311- Higher Education Teaching Professional - Engineering Educator [20, 21]. ENTER aims to certify pedagogical training of engineering educators and the competencies addressed; and register professional engineering educators. Those that are registered can use the title iPEER (International Professional Engineering Educator Register) after their name [22]. The iPEER title is therefore an esteemed designation given to all registered members of the ENTER register, signifying their status as recognized engineering educators. This title acts as a badge of professionalism and competence in the field, indicating that the holder meets the established standards of engineering education. For an educator, using the iPEER title is a way of demonstrating their commitment to quality teaching and ongoing professional development within the engineering community. It assures colleagues, employers, and students alike of the educator's dedication to excellence in their field.

The governance infrastructure of ENTER consists of ENTER Register Secretariat and four committees that report to the Governing Board: Academic Committee, Quality Assurance Committee, Expert Committee, and Monitoring Committee. The Governing Board manages ENTER and is composed of a President and one representative from the Expert Committee, the Quality Assurance Committee, and the Academic Committee. The Academic Committee is composed of one representative for each Higher Education Institution and other organizations that participate as associate members and its functions include review

Professional development programs for approval in the database of courses/programs that ENTER can verify. The Quality Assurance Committee is made up of one representative from each Quality Assurance Agency member of ENTER, its functions include developing and verifying accreditation standards for professional development programs with ENTER Label. The Expert Committee consists of only one appointed expert per continent. Its function is to review documents proposed by the Governing Board and summarize and disseminate the best practices of the ENTER network. Committee members of any of these committees can nominate highly qualified experienced and recognized experts with broad relevant experience in engineering education, engineering pedagogy and quality assurance to become members of the Monitoring Committee.

Three members of the Monitoring Committee evaluate an applicant's portfolio and the supporting evidence for possible inclusion in the ENTER Register and this evaluation determines the level attained. The levels of achievement are:

1. Educator: uses accepted theories and practices.
2. Effective Educator: well-prepared and adjusts teaching strategies to fit both the student and material, considered a role model who inspires and motivates students.
3. Outcomes-based Educator: practices outcome-based teaching and learning, explicitly declares learning outcomes and to what standard student is expected to perform after completing the course, assesses students' performance to make continuous improvements.
4. Scholarly Educator: practices the scholarship of teaching and learning and conducts research in this area and publishes in peer reviewed journals and conferences.
5. Education Researcher: conducts educational research to improve higher education and strategies for impacting the future of education.
6. Senior Education Researcher: leads educational research to improve higher education, strategies for impacting the future of education, its societal impacts and supports technically policy changes at the national and international level.

The portfolio currently accepted for submission does not require translation if it is English, Spanish, French, Portuguese, Mandarin, Kazakh or Russian. However, the goal for the future is to continue adding languages to the list so that professional engineering educators can be language independent. The portfolio must include scans of degree diplomas, proof of employment and professional position, scientific achievements via an ORCID (Open Researcher and Contributor Identification) or similar, and evidence of competency in the following 14 domains (known as APR: Application Portfolio Review) beyond scientific and management skills [16]:

APR1. *Innovations in engineering pedagogy*: Ability to choose optimal strategies and teaching methods using traditional and innovative means, considering technosphere development paths, trends, and challenges in engineering education.

APR2. *Time management*: Ability to manage time efficiently and prioritize professional activities.

APR3. *Effective interaction*: Ability to effectively interact with audience and increase students' interest in the discipline, using psychological tools and multimedia technologies.

APR4. *Enhancement of learning interactivity*: Ability to develop, adapt and implement modern interactive teaching and learning methods and technologies (inter alia, aimed at increasing students' motivation).
APR5. *Systems analysis in education*: Ability to apply system approach to solving problems of Engineering education.
APR6. *Pedagogical psychology and communication*: Ability to apply psychological and pedagogical technologies to professional activities of a teacher.
APR7. Interaction with stakeholders: Ability to work efficiently with the results of scientific research to ensure their publication, to cooperate with labor market and other stakeholders.
APR8. *Sustainable development*: Ability to apply the principles of Sustainable Development in the global context.
APR9. *Digital education*: Ability to design, organize and accompany educational process in X-learning environment.
APR10. *Problem-based, project-based, and practice-oriented learning*: Ability to form students' experience of individual and team work on solving real engineering problems and developing of new engineering solutions.
APR11. *Learning outcomes assessment*: Ability to design forms and methods of continuous monitoring, feedback and final assessment of education quality.
APR12. *Course design*: Ability to develop teaching materials that foster students' competences formation.
APR13. *Engineering innovation process*: Ability to lead research, innovative and design activities (work) of students and student teams, and to foster students to generate innovative ideas, to operate their development and implementation stages.
APR14. *Lifelong learning*: Ability to "ongoing, voluntary, and self-motivated" pursuit of knowledge for either personal or professional reasons, enhancing social inclusion, active citizenship, and personal development, as well.

Since November 2023, with ENTER, almost 2000 engineering educators from 42 countries have registered, and over 4000 are in the process.

Tool and Aspects

A simulation tool was needed to permit applicants to easily determine if they had sufficient qualifications and experience to become registered. ENTER approached the Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) with a project for undergraduates to develop an online simulation that would permit the applicant to gauge their readiness to comply with the requirements for inclusion in the ENTER Registry. LACCEI identified two volunteer undergraduates and one LACCEI staff member to manage the project. The simulation tool/questionnaire can found on the LACCEI website (https://enter.laccei.org/) or viewed in PDF format [23].

The ENTER Framework

A framework was developed to pre-screen these potential candidates that formed the basis of an online questionnaire of 33 questions grouped under five different aspects: academic position/rank (assistant, associate, or full professor), highest degree, years of experience,

pedagogical training, and recognition. Each of these has its array of questions with multiple choice answers to estimate the aspects that the applicant may be able to document. It takes on average two minutes and 45 seconds to complete. The total score will be calculated from the same set of rubrics used by ENTER to determine if the applicant currently can document sufficient credentials to be a registered professional in ENTER. If the system shows the user could qualify to be registered, they complete the application process and submit a fully documented portfolio.

Metrics used for Five Dimensions

The five aspects considered by the framework are quantified using the following rubrics:

Academic Position

The questionnaire asks for evidence validating academic position. The response:

X1. Evidence provided validates academic position. (No academic position – 0, Assistant/Assistant Professor – 1, Associate/Professor – 2, and Full Professor – 3).

Highest Scientific Qualification

The Highest Qualification score sums the answers to three questions X5 + X6 +X7. where:

X5. Evidence of Knowledge Domains according to the applicant's higher education degree. (No-0, Yes-1)

X6. Evidence of Knowledge Domains relevant for the profession of Engineering Educator. (No-0, Yes-1)

X7. Evidence of Highest Academic Degree. (Bachelor (1), Specialist or Master (2), PhD (3) and DSc Aggregation (4))

Experience

The score for experience sums several items, X8+X9+X10+X13+X14+X15+X18, where:

X8. Evidence of overall Pedagogical experience (number of years as engineering educator) (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)

X9. Are the courses (disciplines) lectured within the last 5 years directed to engineering students? (No – 0, Somewhat – 1, Yes – 2)

X10. Evidence of membership in pedagogical / scientific committee(s), (councils) within HEIs relevant to engineering education? (Not relevant/Non-existing - 0, Relevant – 1, Highly relevant – 2)

X13. Evidence of pedagogical experience at other higher education institutions (in the applicant's country or abroad), if any, within the last 5 years relevant? (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)

X14. Evidence of internship experience at industrial companies, research institutes, other organizations within the last 5 years relevant as engineering educator? (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)

X15. Evidence of applicant's membership(s) in professional associations, networks, and societies (if any) relevant for the field of Engineering Educator? (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)

X18. Is the motivation of the applicant to be registered relevant? (Not relevant/Non-existing–0, Relevant – 1, Highly relevant – 2)

The sum is further categorized: if the sum is less than 5 as Not Relevant (0), a sum between 5 and 9 as Relevant (1), and a sum greater than 9 as Highly Relevant.

Pedagogical Training and Professional Development
ENTER certifies pedagogical training and professional development programs according to which and how many of the competencies are addressed. Once certified, participation completion of programs/courses can be verified through ENTER. The applicant can submit evidence of participation in other professional development accredited programs, and these are evaluated according to the competencies addressed.
The Professional Development domain is calculated by X11+X12+X16+Sum APR1 to APR14 (the 14 domains referred section II), and:

X11. Evidence of trainings and professional development programs successfully passed by the applicant within the last 5 years relevant as engineering educator (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)
X12. Evidence of participation in conferences within the last 5 years and/or presentations in these conferences globally relevant as engineering educator (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)
X16. Evidence found searching applicant's Researcher IDs shows research is relevant for engineering education (Not relevant/Non-existing – 0, Relevant – 1, Highly relevant – 2)

The sum is used to classify into a final score:

- Not Relevant (0) if sum is less than 10,
- Relevant (1) if the sum is between 10 and 24, and
- Highly Relevant (2) if the sum is greater than 24.

Recognition Attained
Applicants submit evidence of any recognition attained and this is quantified by X17.

X17. Evidence of applicant's awards, scholarships, honorary titles, (if any) relevant for the field of Engineering Educator? (Not relevant/Non-existing - 0, Relevant – 1, Highly relevant – 2)

The ENTER Continuous Professional Development
ENTER certifies capacity building courses, where Level 1 satisfies 3 of the 14 ENTER competency domains, Level 2 satisfies 7 of the 14 competency domains, and Level 3 addresses all 14 competency domains. The completed ENTER Accredited Professional Development Program (APD) is classified as having completed no levels (0), Level 1 (1), Level 2 (2), or Level 3 (3). The ENTER website lists professional development programs that have been registered thus far [24, 25].

The Portfolio Score and Rubrics

The Portfolio score allows the person (generally an engineer) to be qualified at one of the six levels (see section II). The rubrics used by the simulation tool are the same used by the evaluators assessing supported by the evidence provided, the portfolio and application submitted to ENTER. To standardize evaluations ENTER uses two look up tables (see

appendix) to generate a series of scores that combine in a formula to yield the final decision to approve the registration and determine the level of professional attainment.

Appendix I shows the ENTER Register readiness and possible level that would be awarded. It is used as a lookup table, based on

- the highest degree attained,
- their current academic position, and
- the relevancy of documentation provided in the portfolio.

Many of the classifications of the answers are denoted as Not relevant, Relevant and Highly Relevant, to respectively designate non-existent/insufficient, sufficient, and more than sufficient evidence provided.

The answers to the 33 questions in the simulation are given as X1 to X33. The questions are grouped to quantify Academic Position, Highest Scientific Qualification, Experience, Pedagogical Training & Professional Development, and Recognition Attained. The results are combined to compute scores used in the two lookup tables provided in the Appendix that standardize the evaluation results.

The Portfolio score is estimated in Appendix II by looking up the applicant's Experience, Pedagogical Training and Recognition and results in: Not relevant (0), Relevant (1), Highly Relevant (2). This Portfolio score is then used to look up in Appendix I, together with the applicant's Highest Qualification, Current Academic Position and the level of Professional Development training completed to yield a determination under ENTER Register Level column, whether the applicant would not qualify to be registered (Not registered) having a value of 0. A value greater than 0 determines the person will qualify to be registered and the number signifies the possible ENTER professional attainment level (1 to 6).

Security and Privacy of Enter Data

The ENTER data and web pages must comply with General Data Protection Regulation (GDPR) requirements. The simulation tool, to ascertain correctness and readiness to qualify for inclusion in the ENTER web pages, has been completed by LACCEI volunteers (undergraduates at Florida Atlantic University) and tested for correctness by ENTER experts. ENTER restricts the use of third-party services or plugins to comply with the highest levels of privacy standards. The online form uses Netlify/NodeJS for the backend, and Firebase as its database to integrate with ENTER's secure current system. The software design of the simulation uses an object-oriented approach and follows security practices to avoid common vulnerabilities.

Conclusions

The ENTER simulation tool can inform the user whether they would qualify to be registered as a Professional Engineering Educator in the ENTER registry and estimate the level of professional achievement they can document (Educator – 1, Effective Educator – 2, Outcomes-based Educator – 3, Scholarly Educator – 4, Education Researcher – 5, or Senior Education Researcher - 6). This simulation tool is in the process of being incorporated in

the ENTER webpages for dissemination to the community and will become a valuable resource to expedite evaluation of applicants. Since November 2023, about a year after launching the registry, 6000 have initiated the process, almost 2000 engineering educators from 42 countries have been registered, and over 4000 are in the process of completing their portfolio.

There are several reasons that there is such a large number that have not collected the documentation to complete the portfolio. One reason cited was that they were not certain what to submit to document the 14 competencies. This is a cumbersome task if while there are limited programs available that have been accredited by ENTER. Completion of the accredited capacity building programs is an easier process to substantiate mastery of the competencies. In 2023, ENTER registered iPEER facilitators presented a brainstorming workshop to offer examples of what could be submitted to document each competency. As more programs become accredited by ENTER, the numbers in the pipeline should decrease.

Another reason cited by participants was that it was a substantial effort to gather the documentation without a certainty of what the outcome would be. For this reason, the tool presented in this paper was developed. By being fully transparent in the rubrics and metrics used to calculate the eligibility of the candidate to be registered and determine their level of achievement, it demystifies the process. This simulation tool can be used to pre-screen or for the applicants to self-evaluate and increase their confidence in the application that their efforts could result in international registration title and the classification level that could be expected. Naturally, to complete the process the applicant is still required to supply documentation since this is an evidence-based process. This tool can also be used by the secretariat of ENTER to significantly lower the effort of assessment by the international monitoring committee by eliminating from the pipeline those portfolios that would not qualify to become registered.

The title of iPEER (International Professional Engineering Educator, Registered), awarded to the registered educator, would give added recognition and a personal space in the ENTER Registry where credentials and professional development courses taken can be verified. This process will motivate the completion of ENTER accredited capacity building programs and courses that are certified to cover the 14 domains of competencies that ENTER experts have identified as critical to the Professional Engineering Educator. Additionally, and perhaps more important, is the feedback the applicant receives from the three international experts that review the portfolio. This expert evaluation and the resulting comments indicating options to advance to higher professional attainment levels should motivate the educator to continue improving. Finally, the registration and their personal space in the ENTER Registry yields verifiable credentials of what the registrant has achieved. Some universities are requiring their engineering faculty to undergo the registration and evaluation process to have an impartial evaluation of their pedagogical level. Universities doing this, will get an analysis of their strengths and weaknesses, and can then design professional development programs plans for their faculty. As more emphasis is placed by administrators on the quality or academic performance level of educators, more recognition could be given to this area now that it is quantified and standardized, and the faculty will thus be motivated to seek to improve their pedagogical skills.

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Appendix I (Table 1): ENTER Register Level Lookup Table

Highest Qualification	Position (No = no current position)	Portfolio	Completed ENTER accredited Professional Development	ENTER Register Level
BSc, MSc, Specialist, PhD or DSc	No / Assistant Prof.	Not relevant	No	Not registered
BSc, MSc, Specialist or PhD	Prof. or Associate Prof.	Not relevant	No	Not registered
DSc	Prof or Associate Prof	Not relevant	No	1
BSc, MSc, Specialist, PhD or DSc	No	Relevant	No	Not registered
BSc, MSc, Specialist or PhD	Assistant Prof.	Relevant	No	Not registered
DSc	Assistant Prof.	Relevant	No	1
BSc, MSc or Specialist	Prof or Associate Prof	Relevant	No	Not registered
PhD	Prof or Associate Prof	Relevant	No	1
DSc	Prof or Associate Prof	Relevant	No	2
BSc, MSc, Specialist or PhD	No	Highly relevant	No	Not registered
DSc	No	Highly relevant	No	1
BSc, MSc or Specialist	Assistant	Highly relevant	No	Not registered
PhD	Assistant	Highly relevant	No	1
DSc	Assistant	Highly relevant	No	2
BSc	Prof or Associate Prof	Highly relevant	No	Not registered
MSc or Specialist	Prof or Associate Prof	Highly relevant	No	1
PhD	Prof or Associate Prof	Highly relevant	No	2
DSc	Prof or Associate Prof	Highly relevant	No	3
BSc, MSc, Specialist, or PhD	No / Assistant / Associate / Prof.	Not relevant	Level 1	Not registered
DSc	No / Assistant	Not relevant	Level 1	Not registered
DSc	Prof or Associate Prof	Not relevant	Level 1	2
BSc, MSc, or Specialist	No / Assistant / Associate / Prof.	Relevant	Level 1	Not registered
PhD	No / Assistant	Relevant	Level 1	Not registered
DSc	No	Relevant	Level 1	Not registered
PhD	Prof or Associate Prof	Relevant	Level 1	2
DSc	Assistant	Relevant	Level 1	2
DSc	Prof or Associate Prof	Relevant	Level 1	3
BSc	No / Assistant / Associate / Prof.	Highly relevant	Level 1	Not registered
MSc or Specialist	No / Assistant	Highly relevant	Level 1	Not registered
MSc or Specialist	Prof or Associate Prof	Highly relevant	Level 1	2
PhD	No	Highly relevant	Level 1	Not registered
PhD	Assistant	Highly relevant	Level 1	2
PhD	Prof or Associate Prof	Highly relevant	Level 1	3
DSc	No	Highly relevant	Level 1	2
DSc	Assistant	Highly relevant	Level 1	3
DSc	Prof or Associate Prof	Highly relevant	Level 1	4
BSc, MSc, Specialist	No / Assistant / Associate / Prof.	Not relevant	Level 2	1
PhD	No / Assistant	Not relevant	Level 2	1
PhD	Prof or Associate Prof	Not relevant	Level 2	2
DSc	No	Not relevant	Level 2	1
DSc	Assistant	Not relevant	Level 2	2
DSc	Prof or Associate Prof	Not relevant	Level 2	3
BSc, MSc or Specialist	No	Relevant	Level 2	1
DSc	No	Relevant	Level 2	2
BSc, MSc or Specialist	Assistant	Relevant	Level 2	1
PhD	Assistant	Relevant	Level 2	2
DSc	Assistant	Relevant	Level 2	3
BSc	Prof or Associate Prof	Relevant	Level 2	1
MSc or Specialist	Prof or Associate Prof	Relevant	Level 2	2
PhD	Prof or Associate Prof	Relevant	Level 2	3
DSc	Prof or Associate Prof	Relevant	Level 2	4
BSc, MSc or Specialist	No	Highly relevant	Level 2	1
PhD	No	Highly relevant	Level 2	2
DSc	No	Highly relevant	Level 2	3
BSc, MSc or Specialist	Assistant	Highly relevant	Level 2	2
PhD	Assistant	Highly relevant	Level 2	3
DSc	Assistant	Highly relevant	Level 2	4
BSc	Prof or Associate Prof	Highly relevant	Level 2	2
MSc or Specialist	Prof or Associate Prof	Highly relevant	Level 2	3
PhD	Prof or Associate Prof	Highly relevant	Level 2	4
DSc	Prof or Associate Prof	Highly relevant	Level 2	5
BSc, MSc, Specialist, PhD, or DSc	No	Not relevant	Level 3	2
BSc, MSc, Specialist, or PhD	Assistant	Not relevant	Level 3	2
DSc	Assistant	Not relevant	Level 3	3
BSc, MSc, Specialist, or PhD	Prof or Associate Prof	Not relevant	Level 3	3
DSc	Prof or Associate Prof	Not relevant	Level 3	4
BSc, MSc, Specialist, PhD, or DSc	No	Relevant	Level 3	3
BSc, MSc, Specialist, or PhD	Assistant	Relevant	Level 3	3
DSc	Assistant	Relevant	Level 3	4
BSc, MSc, or Specialist	Prof or Associate Prof	Relevant	Level 3	3
PhD	Prof or Associate Prof	Relevant	Level 3	4
DSc	Prof or Associate Prof	Relevant	Level 3	5
BSc	No	Highly relevant	Level 3	1
MSc or Specialist	No	Highly relevant	Level 3	2

Appendix I (Table 1): ENTER Register Level Lookup Table (continued)

Highest Qualification	Position (No = no current position)	Portfolio	Completed ENTER accredited Professional Development	ENTER Register Level
PhD	No	Highly relevant	Level 3	3
DSc	No	Highly relevant	Level 3	4
BSc	Assistant	Highly relevant	Level 3	2
MSc or Specialist	Assistant	Highly relevant	Level 3	3
PhD	Assistant	Highly relevant	Level 3	4
DSc	Assistant	Highly relevant	Level 3	5
BSc	Prof or Associate Prof	Highly relevant	Level 3	3
MSc or Specialist	Prof or Associate Prof	Highly relevant	Level 3	4
PhD	Prof or Associate Prof	Highly relevant	Level 3	5
DSc	Prof or Associate Prof	Highly relevant	Level 3	6

Appendix II (Table 2): lookup table to gauge overall relevance of portfolio. (Not relevant = insufficient documentation provided, Relevant = documentation provided, Highly relevant = complete documentation provided)

Experience	Pedagogical Training	Recognition	Summary Portfolio Relevance
Not relevant	Not relevant	Not relevant	Not relevant
Relevant	Not relevant	Not relevant	Not relevant
Highly relevant	Not relevant	Not relevant	Not relevant
Not relevant	Relevant	Not relevant	Relevant
Relevant	Relevant	Not relevant	Relevant
Highly relevant	Relevant	Not relevant	Relevant
Not relevant	Highly relevant	Not relevant	Relevant
Relevant	Highly relevant	Not relevant	Relevant
Highly relevant	Highly relevant	Not relevant	Relevant
Not relevant	Not relevant	Relevant	Not relevant
Relevant	Not relevant	Relevant	Relevant
Highly relevant	Not relevant	Relevant	Relevant
Not relevant	Relevant	Relevant	Relevant
Relevant	Relevant	Relevant	Relevant
Highly relevant	Relevant	Relevant	Relevant
Not relevant	Highly relevant	Relevant	Relevant
Relevant	Highly relevant	Relevant	Highly relevant
Highly relevant	Highly relevant	Relevant	Highly relevant
Not relevant	Not relevant	Highly relevant	Relevant
Relevant	Not relevant	Highly relevant	Relevant
Highly relevant	Not relevant	Highly relevant	Highly relevant
Not relevant	Relevant	Highly relevant	Relevant
Relevant	Relevant	Highly relevant	Highly relevant
Highly relevant	Relevant	Highly relevant	Highly relevant
Not relevant	Highly relevant	Highly relevant	Highly relevant
Relevant	Highly relevant	Highly relevant	Highly relevant
Highly relevant	Highly relevant	Highly relevant	Highly relevant