



PROFESSIONAL REGULATORY BOARD OF ELECTRICAL ENGINEERING Resolution No. <u>06</u>

Series of 2021

GUIDELINES ON THE CREATION OF A CAREER PROGRESSION AND SPECIALIZATION PROGRAM FOR THE ELECTRICAL ENGINEERING PROFESSION

WHEREAS, Section 2 of Republic Act (R.A.) No. 10968 or the "Philippine Qualifications Framework (PQF) Act" states that it is the policy of the State to institutionalize the PQF to encourage lifelong learning of individuals, provide employee specific training standards and qualifications aligned with industry standards;

WHEREAS, Section 4 of R.A. No. 10968 states that a PQF shall be established which shall describe the levels of educational qualifications and set the standards for qualification outcomes. It is a quality assured national system for development, recognition and award of qualifications based on standards of knowledge, skills and values acquired in different ways and methods by learners and workers of the country;

WHEREAS, Section 5 (c) of the Implementing Rules and Regulations of R.A. No. 10968 provides for the objective of the PQF which is to align domestic qualification standards with the international qualifications framework thereby enhancing recognition of the value and comparability of Philippine qualifications and supporting the mobility of Filipino students, workers and professionals;

WHEREAS, Section 8 of R.A. No. 10968 states that PQF shall incorporate the qualifications level descriptors defined in terms of knowledge, skills and values, application, and degree of independence;

WHEREAS, Section 4 (a), Article II of R.A. No. 10912 or the Continuing Professional Development Act of 2016 states that there shall be formulated and implemented Continuing Professional Development (CPD) Programs in each of the regulated professions in order to enhance and upgrade the competencies and qualifications of professionals for the practice of their professions pursuant to the PQF, the ASEAN Qualifications Reference Framework (AQRF) and the ASEAN Mutual Recognition Arrangements;

WHEREAS, Section 12, Article III of R. A. No. 10912 mandates the Professional Regulation Commission (PRC) and the Professional Regulatory Boards (PRBs) to formulate and implement a Career Progression and Specialization Program (CPSP) for every profession;

WHEREAS, Section 4 (g), Article II of R.A. No 7920 known as "The New Electrical Engineering Law" states that the Professional Regulatory Board of Electrical Engineering (PRB-OEE) shall exercise executive/administrative or quasi-legislative (rule-making) or quasi-judicial (investigative) powers in carrying out the provisions of this Act. It shall be vested with the following specific powers, functions, duties and responsibilities: Look in the condition affecting the practice of the electrical engineering profession, adopt measures for the enhancement of the profession and the maintenance of high professional, technical and ethical standards and the conduct of ocular inspection of places where registrants for the practice their profession, such as, but not limited to: electric plants, substation, industrial plants of factories, commercial establishments, institutional buildings, watercrafts, electric locomotives, engineering offices, repair shops and similar places to determine and enforce compliance with this Act.

WHEREAS, Section 4 (s), Article II of R.A. No. 7920 states that PRB-OEE shall prescribe guidelines and criteria on the CPD program for Professional Electrical Engineers (PEEs), Registered Electrical Engineers (REEs) and Registered Master Electricians (RMEs) and renew their professional licenses after compliance with the CPD requirements;

WHEREAS, Section 37, Article IV of R.A. No. 7920 states that Certificates of Specialty shall be issued by the PRB-OEE, subject to the approval of the PRC, to professional electrical engineers who have been screened and recommended by the integrated and accredited electrical engineering association. These are for specific field fields in which the applicants have specialized knowledge, training and experience and have demonstrated their competence and expertise. The PRB-OEE shall, subject to the approval of the Commission, and after consultation with the said association, prescribe and issue the necessary guidelines for the issuance of these certificates;

WHEREAS, there is a need to issue guidelines for the PRBs in the formulation of a CPSP for their respective professions for inclusion in the Philippine Qualifications Register (PhQuaR);

WHEREAS, the PRB-OEE formulated the CPSP for the Electrical Engineering profession to address the Pathways and Equivalencies of PQF and which was subjected to various national consultations with the Professional Organizations, concerned national government agencies, academe, and industry.

NOW THEREFORE, the Professional Regulatory Board of Electrical Engineering **RESOLVES,** as it hereby **RESOLVED**, to issue these Guidelines on the CPSP for the Electrical Engineering Profession, as follows:

Section 1. Definition of Terms

 Accredited Integrated Professional Organization (AIPO) refers to the concerned Board and PRC Accredited Integrated Professional Organization for a given profession which is specifically mandated by the provision of the Professional Regulatory Law to integrate the professionals into one national organization and where the membership therein by professionals is automatic and mandatory¹;

¹ Sec. 1(e) of PRC Resolution No. 1089, s. 2018 (Revised Rules on the Accreditation of Professional Organizations and Integrated Professional Organizations)

- Accredited Professional Organization (APO) refers to the PRC Accredited Professional Organization where membership therein by professionals is only voluntary²;
- ASEAN Qualifications Reference Framework (AQRF) is a common reference framework which functions as a device to enable comparisons of qualifications across ASEAN Member States³;
- Career Progression in professional life is the process of developing or moving towards a more advanced state in a person's job, title, position, or profession; it outlines the route one may follow in order to reach identified career development goals⁴;
- 5. **Competence** refers to an ability that extends beyond the possession of knowledge and skills, which include cognitive, functional, personal and ethical competence⁵;
- Competency refers to the capability to apply or use a set of knowledge, skills and abilities required to successfully perform and implement critical work functions or tasks in a defined work setting⁶;
- 7. **Equivalency** refers to a process that involves assigning equivalent credits to the competencies demonstrated by a learner through assessment, thereby providing entry points to different levels of qualifications, the purpose of which is to provide opportunities to the learner to continue to learn and to re-enter the educational and training programs at various higher levels without retaking courses on which a learner has already demonstrated competence and knowledge⁷;
- 8. Learning Outcomes are clear statements of what a learner is expected to know, understand and/or do as a result of a learning experience⁸;
- Level Alignment Matrix of the Table of Specifications to the corresponding Policies, Standards and Guidelines and the PQF descriptors which serves as evidence of the Licensure Examination Quality Assurance system. It is also a requirement in the National Referencing Committee procedures for listing and updating of Professional Qualifications in the PhQuaR as issued/conferred by the PRC;
- 10. Level Descriptor is a general statement that summarizes the learning outcomes appropriate to a specific level in the PQF grouped in domains of learning. It

² Sec. 1(f) of PRC Resolution No. 1089, s. 2018 (Revised Rules on the Accreditation of Professional Organizations and Integrated Professional Organizations)

³ Annex 2 (Glossary) of AQRF document

⁴ Sec. 3 (c) of IRR of PQF Act

⁵ Sec. 3 (3.7), Rule I of PRC Resolution No. 1032, s. 2017 (Implementing Rules and Regulations of R.A. No. 10912, known as the Continuing Professional Development Act of 2016)

⁶ Sec. 3 (3.8), Rule I of PRC Resolution No. 1032, s. 2017 (Implementing Rules and Regulations of R.A. No. 10912, known as the Continuing Professional Development Act of 2016)

⁷ Sec. 3 (d) of IRR of PQF Act

⁸ Sec. 3 (h) of IRR of PQF Act

describes what an individual should be able to know, perform or demonstrate at a particular level⁹;

- 11. Lifelong Learning refers to all learning activities whether formal, non-formal or informal, undertaken throughout life, which results in improving knowledge, knowhow, skills, competencies and/or qualifications for personal, social and/or professional reasons¹⁰;
- 12. **Pathways** refers to mechanisms or access ramps which provide access to qualifications and assist people to move easily and readily between the different education and training sectors and between these sectors and the labor market¹¹ which includes professional work experience;
- 13. Philippine Qualifications Framework (PQF) describes the levels of educational qualifications and set the standards for qualification outcomes. It is a quality assured national system for the development, recognition and award qualifications based on standards of knowledge, skills and values acquired in different ways and methods by learners and workers of the country¹²;
- 14. Philippine Qualifications Register (PhQuaR) is the national database of quality assured qualifications authorized under the PQF. It provides information to employers, education and training providers and students. The information includes the Qualification title, Qualification Descriptors, the PQF Level, the Authority granting Agency, the Qualification Code, the Instrument and Date of Authorization. It also includes information on the quality assurance system and procedures applied to the awarding/conferment of the qualifications and the agencies mandated to authorize/issue such qualification¹³;
- 15. **Profession** refers to the career for someone that wants to be part of society, who becomes competent in his chosen field of practice through training, maintains knowledge and skills through continuing professional development (CPD); and commits to behaving ethically to protect the interests of the public;
- 16. **Professional** refers to a person formally certified by a professional regulating body by virtue of having completed the required course of studies and/or practice and whose competence can be measured against an established set of standards;
- 17. Professional Electrical Engineer refers to a person who is qualified to hold himself/herself out as a duly registered/licensed Professional Electrical Engineer under R.A. No. 7920 and to affix to his/her name the letters "PEE"; refers to a person who is a holder of a Certificate of Registration and Professional Identification Card as a PEE, and who, is authorized to undertake any activity within the field of practice under Section 31 (a), Article IV of R.A. No. 7920;

⁹ Sec. 3 (i) of IRR of PQF Act

¹⁰ Sec. 3 (j) of IRR of PQF Act

¹¹ Sec. 3 (I) of IRR of PQF Act

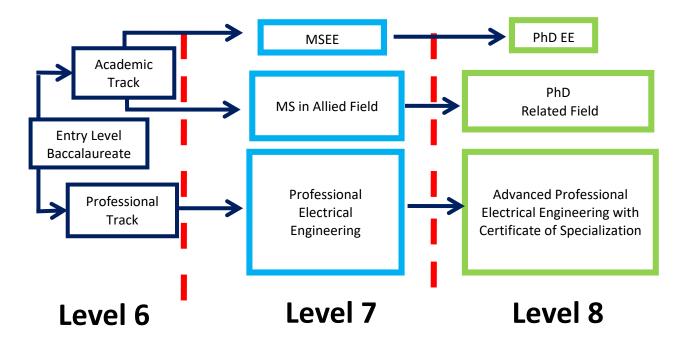
¹² Sec. 4 of RA 10968 (PQF Act)

¹³ https://pqf.gov.ph/PhQuaR

- 18. Qualification refers to a formal certification that a person has successfully achieved specific learning outcomes relevant to the identified academic, industry or community requirements. A qualification confers official recognition of value in the labor market and in further education and learning¹⁴;
- 19. **Qualification Title** is a complete profile of qualifications that indicate the size and level of competencies acquired through the learning process;
- 20. **Registered Electrical Engineer** refers to a person who is qualified to hold himself/herself out as a duly registered/licensed Electrical Engineer under R.A. No. 7920 and to affix to his/her name the letters "REE"; refers to a person who is a holder of a Certificate of Registration and Professional Identification Card as an REE, and who, as such, is authorized to undertake any activity within the field of practice under Section 31 (b), Article IV of R.A. No. 7920; and
- 21. **Specialization** refers to the field of practice of a profession for a particular area of knowledge or the process of becoming an expert in a particular field of professional practice

Section 2. Creation of CPSPs

a. **Career Pathways -** The Career Pathways of the Electrical Engineering profession is from Professional Electrical Engineering Practice (PQF Level 7) and to Advanced Professional Electrical Engineering Practice (PQF Level 8) as diagrammed below.



¹⁴ Sec. 3 (m) of IRR of PQF Act

b. Identification of CPSPs

Initially, the Professional Electrical Engineering has been identified as a pathway to career progression. The CPSPs shall be identified in the future.

c. CPSPs

The Philippine Electrical Engineering CPSP as herein envisioned shall be governed by enabling Rules and Guidelines as prescribed and promulgated by the PRB-OEE in accordance with the provisions of the R.A. No. 7920¹⁵ and PRC Resolution No. 1117, series of 2018¹⁶.

Each specialization Group shall develop its own CPSP guided by the rules and guidelines mentioned above.

Qualification Code	Qualification Title	Descriptor	Level	Authority Granting Agency/ Organizations
POEE 70713-1	Professional Electrical Engineering	The practice of the Professional Electrical Engineering embraces and consists of the practice of the Registered Electrical Engineering as defined in R.A. No. 7920 and plus the sole authority to sign and seal electrical plans, drawings, permit applications, reports and other technical documents prepared by himself/herself and/or under his direct supervision.	7	PRC upon recommendation of the PRB-OEE

1. Philippine Qualifications Register (PhQuaR)

¹⁵ The New Electrical Engineering Law

¹⁶ Formulation of Guidelines on the Creation and Implementation of a Career Progression and Specialization Program for the Regulated Professions

2. PQF Level Alignment

The qualification and professional practice outcomes of the abovementioned qualification title in relation to the descriptors of PQF Level 7 as shown in Annex A.

This Resolution shall take effect after fifteen (15) days following its publication in the Official Gazette or in major newspaper of general circulation in the country.

Let a copy hereof be furnished the U.P. Law Center.

Done in the City of Manila this <u>**18th**</u> day of <u>**May**</u>,2021.

FRANCIS V. MAPILE Chairperson

AIME V. MENDOZA

Member

(VACANT) Member

Attested by

ATTY. OMAIMAH E. GANDAMRA Officer-in-Charge, RRB Secretariat Division

Approved by:

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TEOFILO S. PILANDO, JR. Chairman

NDA D. RFYFS

Commissioner

CUETO, JR. Commissioner

DATE OF PUBLICATION IN THE OFFICIAL GAZETTE : August 2, 2021 Date of Effectivity : August 17, 2021

ANNEX A: LINKS BETWEEN QUALIFICATION OUTCOMES TO THE PQF LEVEL 7 DESCRIPTORS

QUALIFICATION TITLE
QUALIFICATION CODE

Professional Electrical Engineering POEE 70713-1

		PQF Level 7	
	Knowledge, Skills and Values	Application	Degree of Independence
PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
 Applies knowledge of complex mathematics, physical sciences, Information Technology, and electrical engineering principles. Uses relevant and appropriate applied science, electrical engineering principles and techniques in formulating process design and operations improvement. Uses computer programs to solve complex electrical engineering problems. Manages and supervises multi-disciplinary team. 	1.1 1.2	1.1 1.2 1.3	1.3

		PQF Level 7	
	Knowledge, Skills and Values	Application	Degree of Independence
PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
 Identifies, formulates research literature and analyzes complex electrical engineering problems reaching substantiated conclusions using principles of mathematics, natural sciences and advanced engineering sciences. Proposes changes to achieve the desired outputs. Applies results research literature and other technological advances in design and operations improvement. Manages and supervises multi-disciplinary team. 	2.1 2.2	2.2 2.3	2.3
3. Designs and proposes solutions for complex electrical engineering problems and electrical design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.			
3.1 Studies, investigates and gathers data related to problems and prepare proposals to implement solutions while incorporating ethics, safety and environmental considerations.	3.1	3.1	

		PQF Level 7	
	Knowledge, Skills and Values	Application	Degree of Independence
PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
3.2 Develops prototypes; test runs and prepare final recommendations based on results gathered3.3 Manages and supervises multi-disciplinary team.	3.2	3.2 3.3	3.3
4. Conduct investigations and proposes solutions for complex electrical engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusion.			
 4.1 Uses available database information, coordinate with other technical experts. 4.2 Plans and designs experiments in conducting investigations of complex electrical engineering problems. 4.3 Conducts labscale and plant scale trials as may be deemed necessary to validate conclusions. 4.4 Prepares reports and makes presentations to concerned entities on the proposed solutions to the complex electrical engineering problems. 4.5 Directs and oversees multi-disciplinary team. 	4.1 4.2 4.3	4.1 4.2 4.3 4.4 4.5	4.4 4.5

		PQF Level 7	
	Knowledge, Skills and Values	Application	Degree of Independence
PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
 Creates, selects and employs appropriate techniques, resources, and advanced electrical engineering and IT tools, including prediction and modeling, to solve complex electrical engineering problems, with an understanding of the limitations. Be familiar with the appropriate techniques, resources, and modern electrical engineering and IT tools, including prediction and modeling, to complex electrical engineering problems, with an understanding of the limitations. Consolidates applicable techniques and modern tools that can be used to solve complex electrical engineering problems. Prepares recommendations based on results considering practical applications and limitations of process parameters and equipment. Directs and oversees multi-disciplinary team. 	5.1 5.2	5.1 5.3 5.4	5.4
 Utilizes reasoning informed by contextual understanding to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional electrical engineering practice and solutions to complex electrical engineering problems. 			

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 6.1 Be well-acquainted with relevant policies, laws, regulations and technical standards both locally and internationally in conjunction with the Electrical Engineering Professional Practice. 6.2 Prepares electrical plans and designs to address industrial electrical process problems while taking into consideration moral, ethical and environmental concerns. 6.3 Imparts learning to peers. 	6.1 6.2	6.1 6.2 6.3	6.2 6.3
 Recognizes and assesses the sustainability and impact of professional electrical engineering work in the solution of complex electrical engineering problems in societal and environmental contexts. 			
 7.1 Be well-acquainted with relevant applicable technical and engineering standards that can be applied in professional electrical engineering practice. 7.2 Uses gained experience in industrial professional practice to measure impacts on society and environment. 7.3 Imparts learning to peers. 	7.1 7.2	7.2 7.3	7.3

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PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
 8. Acts accordingly to ethical principles and commit to professional ethics and responsibilities and norms of electrical engineering practice. 8.1 Be well-acquainted with the Electrical Engineering Code of Ethics and apply and behave according to this code in professional practice. 8.2 Be well-acquainted with corporate and industrial policies. 8.3 Applies ethical principles in conjunction with electrical engineering practice incorporating public safety as a priority. 8.4 Be a role model to upcoming electrical engineers in terms of integrity, morality and ethics. 	8.1 8.2 8.3	8.1 8.4	
 9. Performs effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings. 9.1 Plans, leads, coordinates and implements designated tasks either as a team leader or member. 9.2 Handles small to medium sized projects. 	9.1 9.2	9.2	

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PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
9.3 Interacts with a network of professionals and participate in projects or activities.		9.3	9.3
10. Communicates effectively on complex electrical engineering activities with the electrical engineering community and with society at large, such as being able to comprehend and prepare effective reports and design documentation, make effective presentations, and give and receive clear instruction.	40.4	40.4	40.4
 10.1 Prepares reports, presentations and other electrical engineering documents in an organized way and relay information related to these effectively. 10.2 Prepares policies, procedures and other documents related to an activity or project and cascade to subordinates, peers and superiors effectively. 	10.1 10.2 10.3	10.1 10.2 10.4 10.5	10.1 10.2
 10.3 Conducts cost-effective trainings to subordinates and peers. 10.4 Communicates clearly with legal entities/ authorities regarding electrical engineering activities. 10.5 Directs and oversees multi-disciplinary team. 			

		PQF Level 7	
	Knowledge, Skills and Values	Application	Degree of Independence
PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
 Demonstrates advanced knowledge and understanding of electrical engineering management principles and economic decision-making and utilizes these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. Plans, leads, organizes and controls small to medium-sized projects or tasks as may be deemed necessary in the practice of electrical engineering. Manages financial aspects of the project. Prepares reports related to projects. Supervises subordinates and peers when needed. 	11.1 11.2	11.2 11.3 11.4	11.2 11.3 11.4

			PQF Level 7	
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	PROFESSIONAL PRACTICE OUTCOMES	Demonstrated advanced knowledge and skills in a specialized or multi- disciplinary field of study for professional practice, self- directed research and/or lifelong learning	Applied in professional/ creative work or research that requires self-direction and/or leadership in a specialized or multi- disciplinary professional work/research	High substantial degree of independence that involves exercise of leadership and initiative individual work or in teams of multi- disciplinary field
12.	Appreciates the need for, and have the preparation and ability to engage in high substantial degree of independent and life-long learning in the broadest context of technological change.			
	 12.1 Attends trainings, seminars, conferences and participate in professional organizations that encourage continued learning in the electrical engineering profession. 12.2 Pursues graduate studies. 12.3 Complies with CPD units required annually. 12.4 Conducts research studies and imparts results to peers. 	12.1 12.2	12.3 12.4	12.2 12.3 12.4
13.	Provides extensive and meaningful contribution to science and to the development of electrical engineering practice.			
	13.1 Develops or applies new electrical engineering concepts or principles.13.2 Formulates or develops new codes, or technical standards in the practice of electrical engineering profession.	13.1 13.2	13.2	

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13. 13.	 Introduces technical innovations to enhance the effectiveness of electrical engineering practice. Introduces, implements policies and guidelines in the practice of electrical engineering profession. Helps in the promulgation of engineering body of knowledge. Shares technical skills or know-how to fellow professionals. 	13.3	13.3 13.4 13.5	13.6
spe	nonstrates substantial technical skills and know-how in the chosen area of ecialization through the ability to design, invent, or analyze to fulfill objectives I requirements with limitations imposed by practicality, regulation, safety, and t.			
14.	design. 2 Identifies technical problems and provide technical solutions.	14.1 14.2 14.3 14.4	14.3 14.4	

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 14.5 Creates a demonstration model. 14.6 Prepares supporting (design) documentations. 14.7 Considers practicality, regulation, safety, and cost. 14.8 Reviews and evaluates design outcome to achieve acceptance. 		14.5 14.6 14.7 14.8	14.5 14.6 14.7 14.8	
15. Demonstrates highest degree of ability to lead or manage project within the area of specialization.				
 15.1 Establishes and manages electrical engineering business/organization. 15.2 Implements planning and design processes. 15.3 Facilitates improvements and innovations. 15.4 Manages significant electrical engineering projects. 15.5 Manages a multi-disciplined team. 15.6 Initiates and leads workplace change. 15.7 Motivates and mentors other professionals. 15.8 Helps and provides guidance to other professionals. 	15.1 15.2 15.3 15.4	15.3 15.4 15.5 15.6 15.7	15.5 15.6 15.7 15.8	

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	emonstrates advanced knowledge and understanding in research and evelopment.			
16	 6.1 Identifies opportunities for new or improved processes or initiated concept of developments. 6.2 Analyzes situation or required outcomes and explored solutions. 6.3 Patents or publishes research outputs. 	16.1 16.2 16.3	16.3 16.4	16.3 16.4