Computer and Electrical Engineering Performance Indicators

(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

1a) Apply and perform the correct mathematical analysis.
1b) Prepare and solve the appropriate physical model of the problem.
1c) Utilize appropriate engineering principles for computer and electrical engineering.

(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

2a) Follow systematic and logical design procedures and define specifications to meet project requirements.
2b) Adhere to realistic constraints such as environmental, social, political, ethical, health and safety, and sustainability.
2c) Consider alternative designs and choose the optimal solution.
2d) Consider a variety of available options in engineering design and make a proper choice based on their impact.

(3) an ability to communicate effectively with a range of audiences

3a) Write technical reports.
3b) Prepare and deliver oral presentations.

(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

4a) Recognize ethical issues involved in a professional setting.
4b) Recognize and cope with professional and ethical issues related to safety and sustainability in engineering problems.
4c) Understand the impact of engineering solutions on society and the environment in a global economic context.
4d) Understand and explain non-technical issues related to global, economic, environmental, and societal contexts.

(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

5a) Fulfill team duties and share in the work of the team.
5b) Listen and communicate with other team members.
5c) Meet deadlines and achieve project goals.

(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

6a) Design and set up experiments.
6b) Conduct experiments and perform measurements.
6c) Analyze data and interpret results.
6d) Use appropriate tools, simulation software, or hardware design tools to solve engineering problems.

(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

7a) Carry out research on engineering topics by reading and reporting on papers in the technical literature.
7b) Involve oneself in professional activities (e.g. meeting, presentations, workshops).
7c) Identify and discuss emerging technologies related to computer and electrical engineering.
7d) Understand the relation of classical topics in engineering with their implementation in modern technologies.

Computer Engineering Proposed (Semester Conversion affected 3040 and 4910+4928)

E = Even Years (2016/17, 2018/19, etc) O = Odd Years (2017/18, 2019/20, etc) A = All Years

		3040	3070	3200	3220	3240	3250	3600	4910	4928	Summary
1. Eng/Sci/Math											**1**
1a	Math	O	E								A
1b	Science		O								O
1c	Engineering				E	O					A
2. Design											**2**
2a	Design								A		A
2b	Constraints								A		A
2c	Alternatives								A		A
2d	Choose Solution								A		A
3. Communicate											**3**
3a	Written Comm.									A	A
3b	Oral Comm.									A	A
4. Eth. & Prof. Resp.											**4**
4a	Ethical Issues								A		A
4b	Professional								A		A
4c	Solution Impact								A		A
4d	Non-technical								A		A
5. Teamwork											**5**
5a	Team Duties									A	A
5b	Communicate									A	A
5c	Deadlines									A	A
6. Experimentation											**6**
6a	Design			O							O
6b	Conduct			O							O
6c	Analyze						O				O
6d	Use Tools							E			E
7. New Knowledge											**7**
7a	Research								A		A
7b	Prof. Activities								A		A
7c	Emerging Tech.								A		A
7d	Modern Tech.								A		A

Electrical Engineering Proposed (Semester Conversion affected 3040 and 4910+4928)

E = Even Years (2016/17, 2018/19, etc) O = Odd Years (2017/18, 2019/20, etc) A = All Years

		3040	3070	3200	3230	3320	3340	3370	4910	4928	Summary
1. Eng/Sci/Math											**1**
1a	Math	O	E					E			A
1b	Science		O								O
1c	Engineering					E					E
2. Design											**2**
2a	Design								A		A
2b	Constraints								A		A
2c	Alternatives								A		A
2d	Choose Solution								A		A
3. Communicate											**3**
3a	Written Comm.									A	A
3b	Oral Comm.									A	A
4. Eth. & Prof. Resp.											**4**
4a	Ethical Issues								A		A
4b	Professional								A		A
4c	Solution Impact								A		A
4d	Non-technical								A		A
5. Teamwork											**5**
5a	Team Duties									A	A
5b	Communicate									A	A
5c	Deadlines									A	A
6. Experimentation											**6**
6a	Design			O							O
6b	Conduct			O							O
6c	Analyze						O				O
6d	Use Tools				E						E
7. New Knowledge											**7**
7a	Research								A		A
7b	Prof. Activities								A		A
7c	Emerging Tech.								A		A
7d	Modern Tech.								A		A