Preparing a Successful SSR

Criterion 1: Students
Criterion 5: Curriculum
Criterion 6: Faculty
Criterion 7: Facilities
Criterion 8: Institutional Support
Program Criteria

Association of Thai Professionals in America and Canada

Criterion 1: Students

- **Student Admissions:** Summarize the requirements and process for accepting new students into the program.
- **Evaluating Student Performance:** Summarize the process by which student performance is evaluated and student progress is monitored. Include information on how the program ensures and documents that students are meeting prerequisites and how it handles the situation when a prerequisite has not been met.
- **Transfer Students and Transfer Courses:** Summarize the requirements and process for accepting transfer students and transfer credit.
- **Advising and Career Guidance:** Summarize the process for advising and providing career guidance to students. Include information on how often students are advised, who provides the advising (program faculty, departmental, or university advisor).
- **Work in Lieu of Courses:** Summarize the requirements and process for awarding credit for work in lieu of courses. This could include such things as life experience, dual enrollment, etc.
- **Graduation Requirements:** Summarize the graduation requirements for the program and the process for ensuring and documenting that each graduate completes all graduation requirements for the program. State the name of the degree awarded (Bachelor of Science in Electrical Engineering, Bachelor of Science in Computer Engineering Bachelor of Science in Computer Science, etc.)
- **Transcripts of Recent Graduates:** Provide transcripts from some of the most recent graduates to the visiting team along with any needed explanation of how the transcripts are to be interpreted. State how the program and any program options are designated on the transcript.

Compliance with Criterion 1: Students

Checklist item for Criterion 1	C,W,D or none
• Evaluate student performance	
• Monitor student progress	
• Advise students regarding curricular and career matters	
• Have and enforce policies for accepting both new and transfer students	
• Have and enforce policies for awarding academic credit for courses taken at other institutions	
• Have and enforce policies for awarding academic credit for work in lieu of courses taken at the institution	
• Have and enforce procedures to ensure and document that students who graduate meet all graduation requirements	

PEV will:

- Be looking for evidence about faculty evaluation of student performance, advising, transfer credits (What are the admission standards? What is the faculty advising protocol in the program for both academic and career matters? One could also link the transcript evaluation requirement with this criterion 1.)

- Check for students fulfilling all graduation requirements. (Do all students meet the same graduation standard that is enforced for both regular and transfer students?)

- Want to talk to some undergraduate students during the site visit to address some of the questions in the Table during these on-site interviews.

Criterion 5: Curriculum

Program Curriculum:

- Describe the plan of study for students in this program including information on course offerings in the form of a recommended schedule by year and term along with maximum section enrollments for all courses in the program for the last two terms the course was taught. If there is more than one curricular path, Table 5-1 should be provided for each path. State whether you are on quarters or semesters and complete a separate table for each option in the program.
- Describe how the curriculum aligns with the PEOs.
- Describe how the curriculum and its associated prerequisite structure support the attainment of the student outcomes.
- Attach a flowchart or worksheet that illustrates the prerequisite structure of the program's required courses (see an example below)
- Describe how your program meets the requirements in terms of hours and depth of study for each subject area (Math and Basic Sciences, Engineering Topics, and General Education) specifically addressed by either the general criteria or the program criteria.

Criterion 5: Curriculum

Program Curriculum: (continued)

- Describe the major design experience that prepares students for engineering practice.
- Describe how this experience is based upon the knowledge and skills acquired in earlier coursework, and incorporates appropriate engineering standards and multiple design constraints
- If your program allows cooperative education to satisfy curricular requirements specifically addressed by either the general or program criteria, describe the academic component of this experience and how it is evaluated by the faculty.
- Describe the materials (course syllabi, textbooks, sample student work, etc.), that will be available for review during the visit to demonstrate achievement related to this criterion.

Course Syllabi:

In Appendix A, include a syllabus for each course used to satisfy the mathematics, science, and discipline-specific requirements required by Criterion 5 or any applicable program criteria.

Compliance with Criterion 5: Curriculum

Curriculum must devote adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution.

The curriculum must support attainment of the student outcomes and must include:

(a) one academic year of a combination of college-level mathematics and basic sciences appropriate to the program.

(b) one and one-half academic years of engineering sciences and engineering design appropriate to the program and utilizing modern engineering tools.

(c) a broad education component that includes humanities and social sciences, complements the technical content of the curriculum, and is consistent with the program educational objectives.

Students must be prepared to enter the professional practice of engineering through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

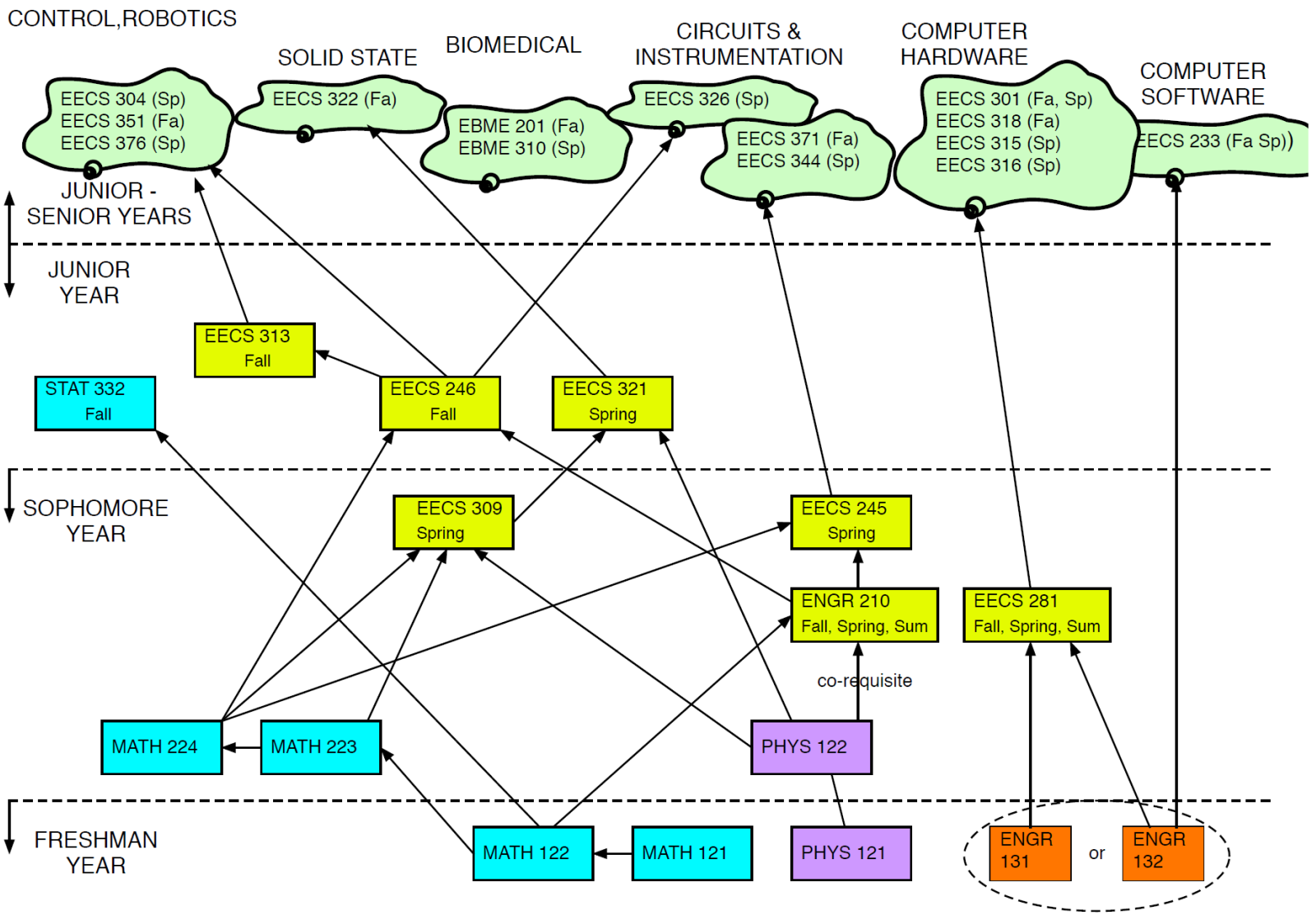
Name of Program

Course (Department, Number, Title) List all courses in the program by term starting with the first term of the first year and ending with the last term of the final year.	Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE.[1]	*Subject Area (Credit Hours)*				Last Two Terms the Course was Offered: Year and, Semester, or Quarter	Maximum Section Enrollment for the Last Two Terms the Course was Offered[2]
		Math & Basic Sciences	Engineering Topics Check if Contains Significant Design (√)	General Education	Other		
Add rows as needed to show all courses in the curriculum.							
TOTALS-ABET BASIC-LEVEL REQUIREMENTS							
OVERALL TOTAL CREDIT HOURS FOR COMPLETION OF THE PROGRAM							
PERCENT OF TOTAL							
Total must satisfy either credit hours or percentage	Minimum Semester Credit Hours	32 Hours	48 Hours				
	Minimum Percentage	25%	37.5 %				

1. **Required** courses are required of all students in the program, **elective** courses (often referred to as open or free electives) are optional for students, and **selected elective** courses are those for which students must take one or more courses from a specified group.
2. For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the maximum enrollment in each element. For selected elective courses, indicate the maximum enrollment for each option.

Instructional materials and student work verifying compliance with ABET criteria for the categories indicated above will be required during the campus visit.

+ OTHER 300 LEVEL TECHNICAL ELECTIVES, 400 LEVEL GRAD COURSES



BASIC ELECTRICAL ENGINEERING UNDERGRADUATE DEGREE COURSES

4/6/16

Compliance with Criterion 5: Curriculum

Checklist for Criterion 5 CURRICULUM	C, W, D or None
Devotes adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution	
One year of college-level mathematics and basic (biological, chemical, and physical; some with experimental experience) sciences	
One and one-half years of engineering topics appropriate to the field of study (See criterion statement)	
General education component that complements the technical content and consistent with program and institutional objectives	
Culminates in a major design experience based on knowledge and skills acquired in earlier course work and incorporates appropriate engineering standards and multiple realistic constraints	

The PEV:

- Needs to determine whether there is one year of mathematics and science in the curriculum
- Needs to determine if there is one and one-half years of engineering topics (45-48 credit hours) in the curriculum.
- Must assess the capstone design course(s) in the program and how well they incorporate student experiences in earlier courses. It is also important to show that the capstone design experience uses appropriate engineering standards.
- The entire required curriculum should be adequately mapped to the program SOs in some manner.

Criterion 6: Faculty

Faculty Qualifications: Describe the qualifications of the faculty and how they are adequate to cover all the curricular areas of the program and also meet any applicable program criteria. This should include the composition, size, credentials, and experience of the faculty. Complete Table 6-1. Include faculty resumes in Appendix B.

Faculty Workload: Complete Table 6-2, Faculty Workload Summary and describe this information in terms of workload expectations or requirements.

Faculty Size: Discuss the adequacy of the size of the faculty and describe the extent and quality of faculty involvement in interactions with students, student advising and counseling, university service activities, professional development, and interactions with industrial and professional practitioners including employers of students.

Professional Development: Provide detailed descriptions of professional development activities for each faculty member.

Authority and Responsibility of Faculty: Describe the role played by the faculty with respect to course creation, modification, and evaluation, their role in the definition and revision of program educational objectives and student outcomes, and their role in the attainment of the student outcomes. Describe the roles of others on campus, e.g., dean or provost, with respect to these areas.

Table 6-1 Faculty Qualifications

Faculty Name	Highest Degree Earned- Field and Year	Rank [1]	Type of Academic Appointment[2] T, TT, NTT	FT or PT[3]	Years of Experience			Professional Registration/ Certification	Level of Activity[4] H, M, or L		
					Govt./Ind. Practice	Teaching	This Institution		Professional Organizations	Professional Development	Consulting/summer work in industry

Instructions: Complete table for each member of the faculty in the program. Add additional rows or use additional sheets if necessary. Updated information is to be provided at the time of the visit.

1. Code: P = Professor ASC = Associate Professor AST = Assistant Professor I = Instructor A = Adjunct O = Other
2. Code: TT = Tenure Track T = Tenured NTT = Non Tenure Track
3. At the institution
4. The level of activity, high, medium or low, should reflect an average over the year prior to the visit plus the two previous years.

Table 6-2 Faculty Work Load

Faculty Member (name)	PT or FT[1]	Classes Taught (Course No./Credit Hrs.) Term and Year[2]	Program Activity Distribution[3]			% of Time Devoted to the Program[5]
			Teaching	Research or Scholarship	Other[4]	

1. FT = Full Time Faculty or PT = Part Time Faculty, at the institution
2. For the academic year for which the Self-Study Report is being prepared.
3. Program activity distribution should be in percent of effort in the program and should total 100%.
4. Indicate sabbatical leave, etc., under "Other."
5. Out of the total time employed at the institution.

Compliance with Criterion 6: Faculty

Checklist for Criterion 6	C, W, D or None
Sufficient number and competencies to cover all curricular areas	
Adequate levels of student-faculty interaction	
Adequate levels of student advising and counseling	
Adequate levels of university service activities	
Adequate levels of professional development	
Adequate levels of interaction with practitioners and employers	
Appropriate qualifications	
Sufficient authority for program guidance, evaluation, assessment, and improvement	
Overall competence of faculty	

- The PEV needs to determine if there is sufficient number of faculty and if the faculty members possess the competencies needed to cover all curricular areas in the program.
- The PEV needs to assess faculty interaction with students in the areas of advising and career counseling.
- The faculty accomplishments need to be presented in the self-study. A professional development plan must be outlined in the self-study, including conference attendance and other faculty enrichment opportunities.
- The level of faculty interaction with industrial practitioners and employers should be included.
- If the program is large, the organization of faculty into smaller domain groups and the authority structure in the program must be outlined in the self-study

Criterion 7: Facilities

Offices, Classrooms and Laboratories: Summarize each of the program's facilities in terms of their ability to support the attainment of the student outcomes and to provide an atmosphere conducive to learning.

- Offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment that is typically available there.
- Classrooms and associated equipment that are typically available where the program courses are taught.
- Laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction. Include those facilities used by students in the program even if they are not dedicated to the program and state the times they are available to students. Complete Appendix C containing a listing of the major pieces of equipment used by the program in support of instruction.

Computing Resources: Describe any computing resources (workstations, servers, storage, networks including software) in addition to those described in the laboratories in Part A, which are used by the students in the program. Include a discussion of the accessibility of university-wide computing resources available to all students via various locations such as student housing, library, student union, off-campus, etc. State the hours the various computing facilities are open to students. Assess the adequacy of these facilities to support the scholarly and professional activities of the students and faculty in the program.

CASE WESTERN RESERVE UNIVERSITY
CASE SCHOOL OF ENGINEERING

Criterion 7: Facilities

Guidance: Describe how students in the program are provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories.

Maintenance and Upgrading of Facilities: Describe the policies and procedures for maintaining and upgrading the tools, equipment, computing resources, and laboratories used by students and faculty in the program.

Library Services: Describe and evaluate the capability of the library (or libraries) to serve the program including the adequacy of the library's technical collection relative to the needs of the program and the faculty, the adequacy of the process by which faculty may request the library to order books or subscriptions, the library's systems for locating and obtaining electronic information, and any other library services relevant to the needs of the program.

Overall Comments on Facilities:

Describe how the program ensures the facilities, tools, and equipment used in the program are safe for their intended purposes (See the 2016-2017 APPM II.G.6.b.(1)).

Compliance with Criterion 7: Facilities

Checklist for Criterion 7	C, W, D or None
Adequate to support attainment of student outcomes and provide an atmosphere conducive to learning: classrooms, offices, laboratories, associated equipment	
Modern tools, equipment , computing resources and laboratories are available, accessible, and systematically maintained and upgraded	
Students provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories	
Adequate library services, computing infrastructure, and information infrastructure	

The PEV:

- Will want to tour the classrooms, laboratories, offices, and computing facilities.
- May want to review the program information technology (IT) support.
- May also want to view a few laboratory equipment set-ups, and will also be looking at the safety regulations that are in place within the program facilities. As many U.S. engineering programs are aging, safety in the laboratory has become a important focus on the ABET visits.
- May also want to see library services and supporting infrastructure

Criterion 8: Institutional Support

Leadership: Describe the leadership of the program and discuss its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.

Program Budget and Financial Support:

- Describe the process used to establish the program's budget and provide evidence of continuity of institutional support for the program. Include the sources of financial support including both permanent (recurring) and temporary (one-time) funds.
- Describe how teaching is supported by the institution in terms of graders, teaching assistants, teaching workshops, etc.
- To the extent not described above, describe how resources are provided to acquire, maintain, and upgrade the infrastructures, facilities, and equipment used in the program.
- Assess the adequacy of the resources described in this section with respect to the students in the program being able to attain the student outcomes.

Staffing: Describe the adequacy of the staff (administrative, instructional, and technical) and institutional services provided to the program. Discuss methods used to retain and train staff.

Faculty Hiring and Retention:

- Describe the process for hiring new faculty.
- Describe strategies used to retain current qualified faculty.

Support of Faculty Professional Development: Describe the adequacy of support for faculty professional development, how such activities such as sabbaticals, travel, workshops, seminars, etc., are planned and supported.

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Compliance with Criterion 8: Institutional Support

Checklist for institutional Support	**C, W, D or None**
Institutional support and leadership sufficient to assure quality and continuity of the program	
Institutional services, financial support, and staff adequate to meet program needs	
Sufficient to attract and retain a well-qualified faculty and provide for their professional development	
Sufficient to acquire, maintain, and operate infrastructure, facilities, and equipment	

The PEV will ask:

- Are there sufficient resources to support the teaching laboratories and to replace aging lab equipment?
- What level of support does the program receive from the college and the home institution?

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Program Criteria

ELECTRICAL, COMPUTER, COMMUNICATIONS, TELECOMMUNICATION(S) Engineering
(Lead Societies: IEEE and CSAB)

- The structure of the curriculum must provide both **breadth and depth** across the range of engineering topics implied by the title of the program.
- The curriculum must include **probability and statistics**, including applications appropriate to the program name; mathematics through differential and integral calculus; sciences (defined as biological, chemical, or physical science); and engineering topics (including computing science) necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components.
- The curriculum for programs containing the modifier "electrical," "electronic(s)," "communication(s)," or "telecommunication(s)" in the title must include **advanced mathematics**, such as differential equations, linear algebra, complex variables, and discrete mathematics.
- The curriculum for programs containing the modifier "computer" in the title must include discrete mathematics.
- The curriculum for programs containing the modifier "communication(s)" or "telecommunication(s)" in the title must include topics in communication theory and systems.
- The curriculum for programs containing the modifier "telecommunication(s)" must include design and operation of telecommunication networks for services such as voice, data, image, and video transport.

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Compliance with Program Criteria

In addition to the ABET criteria 1 to 8, there may be specific program criteria that pertains to the professional society criteria that represents the program's discipline. For EE, an electrical engineering program must include adequate coverage of probability and statistics and the curriculum structure must demonstrate suitable **depth and breadth**.

Checklist for **PROGRAM CRITERIA for EE**	**C, W, D or None**
Breadth and Depth in curriculum?	
Probability and Statistics coverage	
Advanced Mathematics	