



b. ABET PROGRAM EVALUATORS

1. Criteria for Evaluator:

The individual, in order to be considered, must (a) have been actively practicing or teaching metallurgical or materials engineering during the preceding six years and (b) have achieved a level of professional stature commensurate with this responsibility. It is also desirable that he/she have had some contact with engineering education within the past six years. Clearly, high moral character and freedom from prejudice are requirements since the job often requires sensitive judgment decisions in areas relative to personnel. In summary, the individual must be one who is perceived by the academic community as being a peer in the program area being evaluated.

Additionally, in order to meet ABET requirements, prospective program evaluators must meet the following minimum qualifications:

- 1.** Demonstrated interest in improving education.
- 2.** Membership in one or more ABET member societies or willingness to become a member prior to applying to serve as an evaluator. Membership in TMS is highly encouraged.
- 3.** Formal education and recognized distinction in their field.
 - a.** Program evaluators with an industry background must possess the following:
 - i.** Degree appropriate to the field.
 - ii.** Experience in employment of graduates from accredited programs.
 - b.** Program evaluators with an academic background must possess the following:
 - i.** Degree appropriate to the field.
 - ii.** Experience with the accreditation process (desirable).
- 4.** Internet and e-mail access and proficiency in using word processing programs (compatible with Microsoft Word), spreadsheets, and PDF files.

Group Considerations:

The final list of evaluators must satisfy a number of criteria relating to ABET needs and the needs of the metallurgical/materials profession as a whole. These include:

- A.** Geographic distribution (evaluators should not visit institutions near home.)
- B.** Academic/nonacademic distribution (reasonable representation from both is desirable).
- C.** Area of specialization distribution (evaluators for various types of programs must be available).

Group size consistent with an evaluator making a visit at least every other year during term of appointment.

2. Procedure for Evaluator Selection:

Nominations/solicitations for evaluators are made at each of the winter/spring and the fall annual meetings of the TMS Accreditation Committee. Input is sought from other societies with overlapping materials or metallurgical interests. Nominations must include a full resume, letter of intent, and names of references. The TMS/ABET Leadership Group, consisting of the EAC representatives and alternates, investigates the qualifications of the nominee and makes a recommendation based upon both the nominee's qualifications and evaluator group considerations at the fall meeting of the Accreditation Committee. A nominee receiving a majority vote will be presented to the Committee for final approval as an evaluator candidate. The list of evaluator candidates approved by the Accreditation Committee will be supplied to the TMS Board of Directors for review. Each Board member has the opportunity to provide confidential feedback to the Accreditation Committee through the Professional Development Director within one month of receiving the approved evaluator candidate list if they have concerns about the qualifications of any candidate. The Accreditation Committee chair will see that the concern is brought to the attention of the Leadership Committee and the concern investigated. A response will be provided to the person raising the concern through the Professional Development Director within one month of it being provided to the Accreditation Committee chair. The communication with Board members at this point is advisory only and has the purpose of identifying concerns before the evaluator candidate has completed the training procedures outlined in item 3 below and is presented to the Board for appointment to the approved evaluator list.

3. Training Procedures:

All candidates for evaluators must complete the ABET Program Evaluator Candidate Training (PEVC), which includes both pre-work available through the ABET website and a face-to-face training session organized by ABET. Upon completion of the PEVC training, evaluators must attend a special training session, which covers the program criteria for materials, metallurgical and similarly named engineering programs. Such sessions are held at the TMS Annual Meeting, MS&T, and Material Research Society meetings according to the demand, and availability of trainers. In the fall of the year and after the training session, the candidate will be expected to participate in a visit as an observer. The observer will shadow the regular program evaluator throughout the visit but is not permitted to influence evaluation of the program. Following the visit the observer will submit drafts of evaluator documents (statement to the institution, program audit form, evaluator worksheet) to TMS Headquarters. These drafts will be critiqued by the Leadership Group and the regular program evaluator. Positive recommendations of both the Leadership Group and the regular program evaluator will constitute completion of the training.

4. Evaluator Appointment and Review:

Candidates satisfactorily completing the training requirements will be presented to the Accreditation Committee for addition to the evaluator list to be submitted for approval to the TMS Board. Appointments are for a five (5) year period with an annual review of performance for continuation of appointment.

All evaluators who make a visit must submit a copy of the Visit Report to TMS Headquarters. The Leadership Group will review each report and provide feedback to the evaluator. An unsatisfactory review of a report will mandate that the evaluator participate in another training session prior to another visit. Two unsatisfactory report reviews will result in an automatic removal from the approved list.

All evaluators must attend a review training session every second year. These reviews will be held at a TMS Annual Meeting, MS&T, and Material Research Society meetings according to the demand, and availability of trainers.

PROGRAM CRITERIA FOR
MATERIALS¹, METALLURGICAL²,
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: Minerals, Metals & Materials Society

¹Cooperating Societies for Materials Engineering Programs: National Institute of Ceramics Engineers, American Institute of Chemical Engineers, and American Society of Mechanical Engineers

²Cooperating Society for Metallurgical Engineering Programs: Society for Mining, Metallurgy, and Exploration

These program criteria apply to engineering programs including "materials," "metallurgical," "polymer," and similar modifiers in their titles. All programs in the materials related areas share these criteria, including programs with materials, materials processing, ceramics, glass, polymer, metallurgical, and similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry and physics) and engineering principles to materials systems implied by the program modifier, e.g., ceramics, metals, polymers, composite materials; to integrate the understanding of the scientific and engineering principles underlying the four major elements of the field: structure, properties, processing, and performance related to material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field to solve materials selection and design problems, and; to utilize experimental, statistical, and computational methods consistent with the program educational objectives.

2. Faculty

The faculty expertise for the professional area must encompass the four major elements of the field.