IBFES

International Board of Forensic Engineering Sciences

FORENSIC ENGINEERING SCIENCES CERTIFICATION SCHEME OUTLINE

International Board of Forensic Engineering Sciences

Updated August 2021

Certification Scheme

The IBFES program covers the entire process of certifying technically competent and ethically competent practitioners of forensic engineering sciences. The ethical and professional practice is considered equally important to the technical competence.

The applicant is asked on the application form to define the scope of his area of expertise.

This includes the verification as necessary of formal education records and the detailed study and analysis of forensic engineering science reports submitted by the applicant to a court process to determine that the applicant actually has the forensic engineering science experience claimed.

Responses from the applicant's references are given detailed examination and can be verified.

To ensure knowledge, skill and ability of the applicant to deal with potentially hazardous situations involving ethics, the IBFES requires a written analysis of two or more "situations," to identify the potential ethical hazards, offer possible solutions, justification for the selection of one and procedures for possibly avoiding or minimizing that kind of hazard in the future. These situations seldom have a clear-cut precise answer and have several possible procedures.

Likewise, to ensure the applicant has the desired knowledge, skill and ability in the claimed technical area of expertise the IBFES uses an oral "cross-examination" of a report the applicant has written on a case and submitted to a court process. Such a report will inevitably be one in which the applicant has invested best efforts because it will be "dissected" by the opposing experts.

The entire program is conducted by IBFES Diplomate members who have many years of forensic engineering science experience. Each part of the process involves two members for decisions except the oral examination wherein there are three. The final decision on certification is made by the Board of Trustees.

A continuing review of the process is ongoing at all times to maintain the integrity, validity, reliability, and to keep it abreast of developments and changes in the evolving technical and legal communities.

The IBFES examinations are in three parts: Multi Choice Exam, Ethics and Oral

I. The best preparation for the 40-question multiple choice exam is a 4 year ABET accredited Engineering School and the Engineering Licensure testing program. This is very rigorous and generally puts the candidate in the top 2 % of engineers and is a very well-rounded engineering background. Some engineering disciplines do not have a specific Professional Engineering exam, but a Masters or PHD program is also a very

good background to take this exam. A well-rounded engineer will more likely than not find the engineering exam challenging and fun!

II. For the Ethics examination it is recommended that the applicant study carefully the IBFES Code of Ethics and the IBFES Rules of Professional Conduct.

The ethics examination will consist of two parts, each a situation wherein the applicant might find ethical hazards, problems, and/or questions. The applicant is asked to analyze the situation, and in written form define the ethical problems, offer possible solutions and ways in which they might be avoided in the future.

These situations are intended to be representative of actual cases which the applicant might actually encounter. Therefore, the applicant is at liberty to use whatever resources available at the time to assist in analysis.

The purpose is to determine that the applicant can recognize ethical hazards and has an idea of how to deal with them. It is believed that in order to have an ethical practice the person must understand ethics.

It is strongly recommended the applicant do a detailed analysis of own practice by applying each of the items in the IBFES Code of Ethics and the Rules of Professional Conduct. For each item list the points wherein your practice may be at risk and what you would do to prevent a complaint, and deal with a complaint. Also, list what you can do to reduce and/or minimize the potential hazard.

It is recommended a web search of the subject of ethics, and specifically forensic ethics to update impressions and beliefs about ethical practice.

III. The Oral examination is actually a "cross-examination" of the written report submitted by the applicant. The report is one that was prepared for deposition or trial in an actual case. The examiners are two experienced forensic engineering science persons and an attorney, usually a judge, well experienced in such matters.

It is recommended the applicant study several subjects: the rules for the submission of scientific evidence (e.g. Federal Rules of Evidence 702 or equivalent in other jurisdictions), including the Daubert/Joiner/Krumho criteria, the scientific method, duces tecum subpoenas, and the continuity of possession.

The applicant is advised to prepare for the oral examination in the same manner as in preparation for a very tough deposition or trial testimony. Specifically, read the report at least one time, and review in detail any supporting information immediately before the examination. This should include any special legal protocols, etc. essentially unique to

your specific technical field of expertise. Applicant should be prepared to reproduce any calculations included in the report, justify that procedure and interpretation of results.

The examiners will seek to determine the depth of the applicant's technical knowledge, communication skills, skill in analyzing complex technical situations, skill in using the scientific method, analytical skills, interpretation of analytical results, and any other parameter that might influence the decisions of the court. They will also seek to measure applicant's understanding of basic points of evidence and testimony, Daubert questions, and other points frequently encountered in the litigation process.

Question: Were you subjected to a Daubert hearing on the matter which is the subject of this examination? If so, what was your defense?

Question: If you did not have a Daubert hearing, what would have been your defense if one had been required?