



CFCC CERTIFICATION APPLICATION & EXAMINATION GUIDE

3RD EDITION

CFCC



AAACE[®] International's Certified Forensic Claims Consultant (CFCC) Certification Application and Examination Guide

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**Certified Forensic Claims Consultant (CFCC)
Certification Application and Examination Guide**
Third Edition

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Introduction to the CFCC Certification Application and Examination Guide

Unlike other certifications offered by AACE International, the Certified Forensic Claims Consultant (CFCC) certification is intended to assist competent, experienced claims professionals in maintaining their eligibility as testifying experts. The certification can also assist individuals in establishing themselves as potential testifying experts in the field of claims analysis and matters of litigation arising from disputes occurring in the construction industry. As a result, this **CFCC Certification Application and Examination Guide** does not attempt to cover the field of construction litigation, nor does it offer sample examination questions. Individuals applying to take this certification examination, must have substantially more experience and demonstrated competency specific to claims and dispute resolution, than those taking basic competency exams. Thus, this guide will simply advise candidates of the nature of the CFCC certification examination – that is, what a candidate can expect to see when taking the examination. It should be noted that trying to substitute classroom knowledge and book learning, for the necessary extensive practical experience, is a recipe for failure when sitting for this certification examination.

Purpose of CFCC Certification

In litigation of construction contract disputes it is difficult to qualify as an expert. This professional certification is common law based, or mixed law based where common law is part of mixed law. This certification is not intended for individuals from civil law nations unless they have been trained in common law or mixed law practices. In common law jurisdictions, an individual designated as an expert must prove to the trier of fact, each and every time they are proffered as an expert, that they have the requisite education and experience to testify as an expert. This is because experts can testify to opinions (not just facts), based upon their analysis of facts and circumstances, concerning the subject in which they have demonstrated their expertise to the satisfaction of the trier of fact. As such, just because an individual has been accepted as an expert in two or three previous cases on arbitration or litigation, there is no assurance that they will be accepted in another case. In some circumstances, the scope of their testimony may be limited by the trier of fact.

However, the biggest challenge for an individual who has not testified previously is to convince legal counsel to retain them for the very first time. Attorneys representing clients in arbitration or litigation tend to be quite conservative in choosing experts. Attorneys tend to select known experts, people who have testified numerous times. Quite often, attorneys do not consider individuals with no, or limited, testifying experience—simply because these individuals are unknown quantities.

The conundrum of, “You cannot get a job without experience, but you cannot get experience without a job,” holds true for individuals attempting to get their first assignment as an expert. This is what gave rise to AACE International’s CFCC certification. The purpose of the CFCC certification is to demonstrate to legal counsel that those individuals holding this certification have the educational background, demonstrated competency,

experience, and professional certifications, to qualify as a testifying expert. Once over this hurdle, the individual must still demonstrate to legal counsel, and ultimately the trier of fact, that their education, training, and experience are directly relevant to the case in question.

CFCC Certification Requirements

Individuals holding the CFCC certification represent themselves as an expert in one or more aspects of cost engineering, project controls, and project or program management. As such, the requirements to sit for this certification examination are considerably more stringent than other professional certifications which certify competency, not expertise. The minimum requirements are those set forth as follows:

- **Education:** A four (4) year college/university degree from an accredited institution of higher learning in engineering, building construction technology, business, economics, construction management, architecture, building sciences, computer science, mathematics, or a related field.
- **Experience:** A minimum of twelve (12) years of verifiable experience in the construction claims arena. Project assignments will not suffice for this experience requirement. The applicant's experience on jobsites must have been centered on the drafting and submittal of change orders, time extensions and claims. Additionally, the applicant must be able to demonstrate that they have actively and consistently participated in the entire range of dispute resolution activities from claims preparation and submittal through resolution in mediation or litigation. The experience cited must deal directly with the prosecution, defense, and resolution of claims and disputes.
- **Post Education Professional Certifications:** All candidates must have at least one of the following certifications:
 - Admitted to the Practice of Law - State or National Bar Association
 - Certified Construction Contract Administrator (CCCA) - Construction Specifications Institute (CSI)
 - Certified Construction Manager (CCM) - Construction Management Association of America (CMAA)
 - Certified Construction Manager (CCM) - Construction Management Association of Korea (CMAK)
 - Certified Cost Estimator/Analyst (CCEA) - International Cost Estimating & Analysis Association (ICEAA)
 - Certified Cost Professional (CCP) - AACE International (AACE)
 - Certified Estimating Professional - (CEP) - AACE International (AACE)
 - Certified Practicing Project Director (CPPD) - Australian Institute of Project Management (AIPM)
 - Certified Professional Construction (CPC) - American Institute of Contractors (AIC)
 - Certified Professional Cost Engineer (CPCostE) - Association of Cost Engineers (ACostE)
 - Certified Professional Estimator (CPE) - America Society of Professional Estimators (ASPE)

- Chartered Project Professional (ChPP) – Association of Project Management (APM)
- Certified Senior Project Manager (CSPM) - International Association of Project Managers (IAPM)
- Chartered Quantity Surveyor (CQS) - Royal Institution of Chartered Surveyors (RICS)
- Expert Certified Construction Claims Specialist (ECCCS) - Society of Construction Claims Specialists (SCCS)
- Expert Certified Construction Delay Analyst (ECCDA) - Society of Construction Claims Specialists (SCCS)
- Level A or Level B Certification - International Project Management Association (IPMA)
- Master, Expert or Fellow Level - Cost Management (CM) - Guild of Project Controls (GPC)
- Master, Expert or Fellow Level - Forensic Analysis (FA) - Guild of Project Controls (GPC)
- Master, Expert or Fellow Level - Planning & Scheduling (PS) - Guild of Project Controls (GPC)
- Master, Expert or Fellow Level - Project Controls (PC) - Guild of Project Controls (GPC)
- Planning & Scheduling Professional (PSP) - AACE International (AACE)
- PRINCE 2 - AXELOS
- Professional, Chartered or Registered Engineer (PE, P.Eng., Ceng, etc.) - Any state or national engineering association or licensure organization
- Program Management Professional (PgMP) - Project Management Institute (PMI)
- Project Professional Qualified (PPQ) - Association for Project Management (APM)
- Project Scheduling Professional (PMI-SP) - Project Management Institute (PMI)
- Registered, Chartered or Licenses Architect (RA, RAIA, RAIC, etc.) - Any state or national architectural association or licensure organization

If an individual has a post education professional certification not on the above list, they may submit proof of the certification and information from the certifying association or organization to AACE International, for consideration as fulfillment of this requirement. [Click here to complete the request form.](#)

If an individual does not have one of these certifications or another certification acceptable to AACE International, they may substitute an additional four (4) years of claims analysis experience, in lieu of a post education professional certification.

- **References:** All candidates must submit, along with the application, four (4) letters of recommendation from industry professionals (external or in-house counsel or attorneys and/or clients, past or present) who can attest to the candidate's years of claims related experience.
- **Written Report or Professional Paper:** All candidates must submit one of the following: (a) an expert report prepared by them, submitted to, and accepted by an adjudicator, as evidence in a matter of litigation; (b) a formal claim submittal prepared by them; or (c) a claims related professional/technical paper, concerning an issue in which they have personal experience, and that has been published or accepted for publication by a professional journal. The report or paper submitted must have been

prepared by the candidate, no more than 24-months before applying to sit for the certification exam and must be submitted electronically along with the application.¹

- **Guidance Documents:** All candidates for the CFCC certification must review, accept, and agree to abide by, both AACE's *Canon of Ethics* and ASFE's *Recommended Practices for Design Professionals Engaged as Experts in the Resolution of Construction Industry Disputes*. (This latter set of recommended practices is included as a provision of the certification examination application because AACE International endorsed these recommended practices on July 9, 1988.)

CFCC Certification Examination Structure

The CFCC certification examination is a rigorous five-hour computer-based testing (CBT) examination, conducted in a controlled environment, by testing center proctors who adhere to AACE's procedures for administering and proctoring professional certification examinations². Successfully completing all elements of the CFCC certification examination is required for the candidate to achieve the certification. Not all candidates accepted to sit for the CFCC certification examination will pass the examination.

The CFCC certification exam consists of two components: multiple choice questions and written essay assignments. The exam is open book, as testifying experts are almost always allowed to look things up to refresh their memories and make certain their answers are accurate when involved in a case. Therefore, candidates can bring and use reference books, articles, etc., limited to two resources of choice.

It should be noted that all questions included in the CFCC certification exam are based on common law principles or mixed law principles, where common law is part of mixed law. Questions related directly to specific state or national laws have been removed from the examination. Candidates from civil law nations should access and review construction claims books and manuals from common law countries, or mixed law countries.

The breakdown of the multiple-choice questions is approximately the following:

Questions related to –

- Legal knowledge, dispute resolution, and rules of evidence = 35% of the questions
- Cost damages, estimating, and loss of productivity = 20% of the questions
- Planning, scheduling, and delay analysis = 15% of the questions

¹ If the candidate is relying upon a claims submittal or an expert report authored by the candidate related to an active or ongoing litigation, the candidate is allowed to redact names and other related information, so as not to violate any confidentiality restrictions related to the case.

² Under certain circumstances, online proctoring is also available to candidates who can meet the system requirements.

- Project management and documentation = 15% of the questions
- Ethics and professional practice = 15% of the questions

The objective of the multiple-choice questions of the certification exam is to test the candidate's broad knowledge of all aspects of claims and disputes, including the candidate's knowledge of the legal system and their knowledge of the professional practices and ethical issues involved with becoming a testifying expert.

The candidate will be given a total of four (4) essay questions for which a written, narrative response is required.

Multiple-Choice Portions of the CFCC Certification Examination

The multiple-choice questions cover topics as summarized below. This information is intended to give candidates an idea of the broad scope of knowledge tested in the exam.

- **Legal knowledge, dispute resolution and evidentiary rules (35%):** Questions related to the following topics will likely be encountered on the certification exam:
 - Admissibility of e-mail and personal diaries
 - Admissibility of web related research used in expert reports
 - Burden of proof
 - Causes of project acceleration and deceleration
 - Custodian of records related issues
 - Deposition process and procedures
 - Determination of dispute resolution methods
 - Differences between directed and constructive changes
 - Differences in arbitration between arbitral bodies
 - Enforceability of exculpatory clauses
 - Entitlement related issues
 - Impact of force majeure clauses
 - Issues involving the law of the contract and impact on the claim process
 - Issues related to consequential damages and recoverability of the same
 - Legal impact of contractual delay clauses
 - No damages for delay clauses – reliability, enforceability, and exceptions
 - Notice related issues
 - Preservation of records in litigation
 - Purpose of the changes clause
 - Purpose of the suspension of work clause

- Reservation of rights issues
 - Risk allocation of typical differing site condition clauses
 - Rules and practices governing legal privilege
 - Spoliation of evidence issues, and potential liability related thereto, and
 - Types of termination clauses and issues related to each
-
- **Cost damages, estimating, direct and indirect costs, loss of productivity (20%):** Questions concerning the following topics will likely be encountered on the certification exam:
 - Acceptable approaches for adjusting contract value for added or deleted work
 - Calculating “buy back” versus delay damages
 - Calculation of acceleration costs
 - Calculation of and issues related to total cost and modified total cost methods
 - Calculation of cumulative impact costs
 - Calculation of direct and indirect costs
 - Calculation of disruption costs
 - Calculation of equipment costs
 - Categorization of various field and home office costs
 - Costs to be included or excluded from delay damage calculations
 - Damages arising from owner caused delay
 - Definition of and issues related to economic waste
 - Difference between delay and impact costs
 - Discrete cost calculations
 - Earned value techniques
 - Enforceability of liquidated damages clauses
 - Entitlement to extended overhead costs
 - Estimating techniques
 - Justification of total cost calculations
 - Measured Mile technique and information needed to support it
 - Methods and techniques for calculating extended home office overhead costs
 - Methods and techniques for calculating loss of productivity costs
 - Methods to prove cumulative impact
 - Potential credits against contractor claim settlements
 - Recovery of delay damages
 - Time related versus non-time related costs

- **Planning, scheduling and delay analysis (15%):** Questions concerning the following topics will likely be encountered on the certification exam:
 - Accepted schedule delay analysis techniques
 - As-planned versus as-built schedules and their use
 - Calculation of delay
 - Concurrent delay issues – impact, proof required and calculation
 - Contemporaneous update methodology
 - Creation of collapsed as-built schedules
 - Dates employed in forensic scheduling
 - Definition and calculation of the critical path
 - Delay analysis related to weather delays
 - Delay analysis when no baseline schedule was issued
 - Impact of compensable versus non-compensable delay
 - Impact of scheduling specifications and delay clauses on delay related issues
 - Independent, serial and sequential delays – analysis and their impact
 - Near critical path issues
 - Observational versus modeled forensic scheduling
 - Ownership of float issues
 - Pacing delay issues
 - Parallel critical paths and their impact on delay analysis
 - Prospective and retrospective delay analysis techniques
 - Reviewing and analyzing contemporaneous schedule updates
 - Schedule delay analysis processes
 - Techniques for verification of as-built schedules
 - Types of delay
 - Use of bar charts in project management and litigation
 - Use of impacted as-planned schedules

- **Project management practices, requirements, techniques, and documentation (15%):** Questions concerning the following topics will likely be encountered on the certification exam:
 - Ability of owners to withhold payment
 - Advantages to sole sourcing subcontractors
 - Allocation of risk and purpose of risk sharing clauses
 - Ambiguous specifications and how contracts deal with them

- Bid escrow process
 - Bidding mistakes and errors and their consequences
 - Causes of change under typical contracts
 - Claims filing process
 - Contract document issues
 - Cost tracking and issues related thereto
 - Establishment and use of project contingency
 - Impact of encounters with force majeure situations
 - Intent of contractual notice provisions
 - Justification for change orders
 - Management of change on projects
 - Mechanics lien issues
 - Multiple prime contract issues and disputes
 - Potential impact of issuing changes without schedule analysis
 - Potential impact of refusing to issue time extensions when warranted
 - Productivity issues
 - Project delivery methods
 - Roles of responsibilities of project representatives
 - Surety bond requirements and issues
 - Types of contracts
 - Use and impact of the order of precedence clause
-
- **Ethics and professional practice (15%):** Questions concerning the following topics will likely be encountered on the certification exam:
 - Acceptance of compensation from more than one party for the same work
 - Chain of custody issues
 - Confidentiality agreements and potential continuing obligations
 - Contingent fees for expert witness assignments
 - Dealing with mistakes in expert reports
 - Dealing with published opinions contrary to your own
 - Distinction between an advocate and an independent expert
 - Documents to be reviewed when preparing an expert report
 - Issues related to an expert's curriculum vitae
 - Necessity of performing adequate conflict checks when accepting an assignment
 - Potential personal liability under false claims statutes

- Potential risk of failing to conform to ethical standards when acting as an expert
- Preparation and presentation of expert reports
- Preservation of evidence used in tests and investigations
- Preserving privilege as an expert
- Quantification of damages when acting as an expert
- Reliance on information provided by others
- Risk of always testifying for one side in all assignments
- Risk of testifying beyond the scope of one's experience as an expert
- Risks of relying upon unsubstantiated statement(s) from a client when preparing an expert report
- Role of the expert in litigation
- Rules regarding reliance upon assumptions when preparing an expert report
- Testifying on a report prepared by a team
- Understanding the rules of evidence as applied to expert testimony
- What experts can and cannot testify to
- When an expert may be required to withdraw from a case

Essay Portion of CFCC Certification Exam

The exam will consist of four essay assignments, randomly selected from a pool of scenarios. The scenarios outlined in each essay question are like those a testifying expert is customarily involved with. The purpose of this portion of the certification exam is to explore the candidate's experience, knowledge, analytical and communication skills, more thoroughly than can be achieved through the multiple-choice questions.

Unless the instructions direct otherwise, each essay response must be answered in narrative form, in full sentences (not notes or bullet points). Candidates should consider each essay response to be an initial draft report for the client or their legal counsel. Grammar, punctuation, and spelling count, just as they do in real life when presenting a report to an attorney or legal advisor. Candidates need to read the instructions carefully as some essay questions indicate that the candidate may be working for the owner, others for the contractor, and others as a neutral expert on behalf of the court. Candidates will be graded primarily on the logic of the analysis presented on each essay, as well as the thoroughness of the content.

One approach to answering these essay questions is to follow the background, issue, rule, analysis, and conclusion (BIRAC) method. That is, include the following in each essay:

- **Background:** What is the background or situation as the candidate understands it? This may also be the section where the candidate includes the assumptions, they relied upon in preparing the remainder of the essay.
- **Issue:** What issue has been presented and is being analyzed?
- **Rule:** What is/are the general rule(s) to be followed, whether legal or practical issues?
- **Analysis:** The candidate's analysis of the issue, which should be based upon on the facts presented and the necessary assumptions made by the candidate.
- **Conclusion:** The candidate must reach and present a conclusion for each essay.

Essay question topics include the following:

- Analyzing schedule delay in situations where there are disputes over actual progress.
- Comparative analysis of arbitration versus litigation for a complex claim
- Cumulative impact claim situations
- Differing site condition situations
- Potential cardinal change situations
- Potential conflict of interest situations
- Potential termination for default situations
- Pursuing delay claims in the face of a no damages for delay clause
- Selection and use of a document management system
- Situations involving weather delays
- Situations with multiple prime contractors and site accessibility

Recommended References and Resources

No recommended list of books or manuals is offered in this certification guide. By the time a claims analyst has reached the level of experience and competency required to sit for this certification examination, the individual should have already built their own library of references and resources and thus does not need a reference list. There are numerous books and course manuals on the market in common law countries concerning construction claims and dispute resolution. It is not possible to arrive at a consensus on a list of books that should be reviewed when preparing for this certification examination.

The CFCC exam is open book to allow a candidate to use a maximum of two (2) reference books, of their choice, during the exam. Downloaded reference books should be printed and bound in a notebook; no loose paper, iPads, Kindles, etc., are permitted for resource materials.

Glossary of Terms

Likewise, this certification guide contains no glossary of terms. As above, by the time an individual has gained the level of experience and competency required to take this examination, it is expected that the terms common to construction disputes are already well known to the individual.

Conclusion

This certification exam is lengthy and quite difficult. The CFCC Certification does not certify basic competency, but rather, actual expertise in the role of a testifying expert in a construction dispute going to arbitration or litigation. It requires significant in-depth experience in and knowledge of legal issues, damage calculation and analysis, scheduling and delay analysis, project management and documentation, and the professional practice and ethical considerations that testifying experts deal with daily.

Appendix 1 – ASFE Recommended Practices for Design Professionals Engaged as Experts in the Resolution of Construction Industry Disputes

It is the obligation of an expert to perform in a professional manner and serve without bias. Toward these ends:

1. The expert should avoid conflicts of interest and the appearance of conflicts of interest.
2. The expert should undertake an engagement only when qualified to do so and should rely upon other qualified parties for assistance in matters which are beyond the expert's area of expertise.
3. The expert should consider other practitioners' opinions relative to the principles associated with the matter at issue.
4. The expert should obtain available information relative to the events in question in order to minimize reliance on assumptions and should be prepared to explain any assumptions to the trier of fact.
5. The expert should evaluate reasonable explanations of causes and effects.
6. The expert should strive to assure the integrity of tests and investigations conducted as part of the expert's services.
7. The expert witness should testify about professional standards of care³ only with knowledge of those standards which prevailed at the time in question, based upon reasonable inquiry.
8. The expert witness should use only those illustrative devices or presentations which simplify or clarify an issue.
9. The expert should maintain custody and control over whatever materials are instructed to the expert's care.
10. The expert should respect confidentiality about an assignment.
11. The expert should refuse or terminate involvement in an engagement when fee is used in an attempt to compromise the expert's judgment.

³ "Standard of care" is commonly defined as that level of skill and competence, ordinarily and contemporaneously demonstrated by professionals of the same discipline, practicing in the same locale, and faced with the same or similar facts and circumstances.

12. The expert should refuse or terminate involvement in an engagement when the expert is not permitted to perform the investigation which the expert believes is necessary to render an opinion with a reasonable degree of certainty.
13. The expert witness should strive to maintain a professional demeanor and be dispassionate at all times.

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