



# AFS Professional Certification Program

## **The Revised American Fisheries Society Professional Certification Program**

***The program, described in this article, was implemented on 1 July 1998.***

By the American Fisheries Society Task Force on Professional Certification

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### **Background**

The American Fisheries Society (AFS) Governing Board approved a revised program of professional certification at its midyear meeting in March 1997. **The program, described in this article, was implemented 1 July 1998.** The main differences between the existing and revised plan are **(1)** a change in the certification titles, from associate fisheries scientist and certified fisheries scientist to associate fisheries professional and certified fisheries professional, **(2)** a change in education requirements, and **(3)** a requirement for certification renewal every five years. The experience requirements are more clearly described but in essence have not changed.

Changes in the certification program will affect current and future associate and certified fisheries professionals and colleges and universities that provide fisheries education. **To give universities and students time to adapt to the new education requirements, those requirements will become effective 1 July 2002.** All applicants for certification before that date must satisfy current education criteria, and certified professionals will not have to complete additional course work to remain certified after implementation of the new education criteria.

**Certification renewal will be phased in throughout five years beginning 1 July 1998.** Eventually, all certified fisheries professionals will need to apply for certification renewal every five years. However, during the phase-in period, one-third of the certified fisheries professionals must apply for renewal by three years, one-third by four years, and the final one-third by five years. Individuals in the three groups will be randomly selected and notified by AFS. Because certification renewal requires documentation of continuing education and professional activities, current associate and certified fisheries professionals should begin keeping logs of those activities by 1 July 1998. Details of the certification renewal requirements and qualifying activities are described in this article.

### **Professional Certification Program**

A fisheries professional is an individual with specialized education in the sciences and technologies involving the structure, dynamics, and interactions of habitat, aquatic organisms, and humans. He or she may be a generalist in fisheries resource management or a specialist in one or more allied disciplines such as aquatic biology, limnology, oceanography, aquaculture, fisheries biometrics, fisheries economics, and fisheries engineering among others. Although areas of specialization may be varied, the individual's professional responsibilities must involve fish. Fisheries professionals are dedicated to high-quality service and the achievement of specific goals and objectives. They promote conservation—optimization of benefits for society while maintaining the integrity, diversity, and sustainability of aquatic systems—through research, education, management, and administration. Fisheries professionals strive for high standards of competence and integrity to establish mutual confidence and respect and to bring credit to their profession, employers, and community.

Certification is widely practiced by the professions as one means of setting standards and guidelines for professional recognition. It serves to upgrade the professional image and is a mark of accomplishment. Certification also is a mechanism to demonstrate responsible peer evaluation. The specific objectives of certification are as follows: **(1)** to provide governmental and nongovernmental agencies and organizations, private firms, courts, and the general public with a definitive minimum standard of experience and education for fisheries professionals; and **(2)** to foster broader recognition of fisheries professionals as well-educated and experienced, acting in the best interest of the public.

The AFS has worked to advance conservation of fishes and aquatic resources around the world for more than a century. With almost 10,000 members, the Society promotes educational, scientific, and technological development of all facets of fisheries science and management.

## **Certification Description**

Two tiers of certification are available. An applicant who satisfies course work and degree (minimum of B.S. or B.A.) requirements but has insufficient or no experience may become an Associate Fisheries Professional (AFP). An applicant who satisfies course work and degree requirements and has a specific number of years of qualifying experience and a specific number of professional development quality points (PDQPs) may become a Certified Fisheries Professional (CFP).

**I. Associate Fisheries Professional (AFP)**—Applicants must meet the academic (course and degree) requirements as prescribed under Guidelines for Professional Certification.

**II. Certified Fisheries Professional (CFP)**—In addition to the academic requirements mentioned above, minimum experience and professional development requirements are listed under Guidelines for Professional Certification.

Although the same application form is used, applicants must designate the certification category, AFP or CFP, for which they are applying. If uncertain (because of course work variances, questions about qualifying/nonqualifying experience, professional development, etc.) as to the tier for which they qualify, a third choice may be indicated. This choice means that the applicant accepts the level of certification (AFP or CFP) granted by the AFS after its review.

Associate Fisheries Professional certification may be retained for a maximum of eight years, at which time the requirements for a Certified Fisheries Professional must be met and applied for in order to retain any AFS certification. The AFP must submit a new application with all requested information, with the exception of the course list and transcripts (unless further education has been acquired).

## **Guidelines for Professional Certification**

Minimum course requirements 1, 2, 3, 4

**(A) Fisheries and aquatic sciences courses.** A minimum of four (4) courses, for a total of twelve (12) semester or eighteen (18) quarter hours. Of the four (4) courses, at least two (2) must be directly related to fisheries science (e.g., fisheries science, ichthyology, fisheries management, fish ecology, aquaculture or fish culture, fish diseases, etc.), and at least one (1) must cover principles of fisheries science and management. Therefore, a maximum of two (2) nonfisheries, aquatic science courses (e.g., limnology, aquatic entomology, stream ecology, etc.) can be used in this category.

**(B) Other biological sciences courses** that, when added to the preceding courses, total to thirty (30) semester or forty-five (45) quarter hours.

**(C) Physical sciences courses.** Fifteen (15) semester or twenty-three (23) quarter hours.

**(D) Mathematics and statistics courses.** Six (6) semester or nine (9) quarter hours, including one (1) calculus and one (1) statistics course or two (2) statistics courses. This new educational requirement will become effective July 1, 2002 until then please use the current guidelines. **The guidelines to use before July 1, 2002 are six (6) semester or nine (9) quarter hours, including college algebra or calculus and one course in statistics.**

**(E) Communications courses.** Nine (9) semester or thirteen (13) quarter hours. Three (3) semester or five (5) quarter hours may be taken in communications-intensive courses (see explanation below) if officially designated as such by the university or college at which they were taken.

**(F) Human dimensions courses.** Six semester or nine quarter hours. This new educational requirement will become effective July 1, 2002.

### **Description of course categories**

The **fisheries and aquatic sciences category** must include four courses related to understanding or manipulating aquatic ecosystems. Courses such as fisheries science, limnology, oceanography, fisheries management, ichthyology, aquaculture or fish culture, taxonomy of aquatic organisms, and aquatic ecology are acceptable. Courses such as vertebrate biology, wildlife management, ornithology, general ecology, etc. do not belong in this category. The course designated as fulfilling the principles of fisheries science/management requirement must include fisheries population dynamics and habitat assessment and management. It must be an upper-division course (i.e., junior, senior, or graduate level) and must be at least three semester or four quarter hours. All combined fisheries and wildlife courses count as if they were 100% fisheries.

**Physical sciences category courses** include chemistry, physics, soils, geology, hydrology, earth science, astronomy, and meteorology.

**Mathematics and statistics category courses** must include one course each in calculus and statistics or two statistics courses. **(Effective after July 1, 2002)**

The **communications category** includes courses such as composition, technical writing, and verbal communication. Literature, foreign language, other humanities courses, and seminars do not count. Communications-intensive courses are defined as those whose primary subject is not communications but rather have intensive communications requirements and are officially designated as such by the university. Officially designated means that the university has a formal listing of courses as communications-intensive or a similar title, and that certain criteria have been met by those courses to receive such designation. Officially designated communications-intensive courses credited in this category also may be counted in another category. For example, if a fisheries management course is designated as communications-intensive, the course may count for full credit in both the fisheries and aquatic science category and the communications category.

**Human dimensions category courses** deal with social aspects of natural resource science and management. They include courses such as named courses in human dimensions of natural resources and courses in policy, planning, administration, law, ethics, public relations, leadership, conflict resolution, natural resource economics, and others related to natural resource management. Introductory social science courses such as sociology and psychology do not qualify. Courses in this group may be double-counted as fulfilling course requirements in the fisheries and aquatic sciences category, but the credit hours must be apportioned between the two categories based on the percentage time devoted to the human dimensions topic. **(Effective after July 1, 2002)**

## **Minimum Degree and Experience Requirements for Certified Fisheries Professionals**

**(1)** A bachelor of science or bachelor of arts degree, plus five years of full-time qualifying experience, post-bachelor's degree

**or**

**(2)** A master of science or a master of arts degree, plus four years of full-time qualifying experience, post-bachelor's degree

**or**

**(3)** A doctor of philosophy degree, plus two years of full-time qualifying experience, post-bachelor's degree.

### **Description of qualifying experience**

Qualifying experience is that in which the candidate applies current knowledge in the fisheries sciences within the context of fisheries management, research, education, or administration. Because the fisheries profession is so varied in specialization, identifying qualifying experience cannot be easily generalized.

Below are types and examples of qualifying experience in each area:

Management involves the application of fisheries science principles (e.g., population dynamics, aquatic biology, limnology, habitat assessment and manipulation, human dimensions, fish culture, biometrics) toward the accomplishment of specific fisheries management goals and objectives. The candidate should have responsible charge or supervision over the planning, implementation, and assessment of projects. Responsible charge or supervision is defined as the direction of work such that the successful completion of the work depends on decisions made by the professional with limited oversight, direction, or approval of others. Projects include recreational and commercial fisheries investigations and management, fish culture, environmental assessment, habitat restoration or enhancement, and fish disease management. Qualifying experience requires that the candidate use independent judgment and action.

Research involves responsible charge or supervision of field or laboratory fisheries research projects. Qualifying experience includes oversight responsibility for design, implementation, analysis, and report writing. Research projects should either be published in a recognized, peer-reviewed journal or used by the employer for the purpose of improved scientific methodology, regulatory decision making, or resource management practices.

Education involves college-level teaching of various facets of fisheries management, research, and administration. Education also may involve development and delivery of educational programs in fisheries for dissemination to the general public or particular stakeholders.

Administration involves direct-line authority over other fisheries professionals engaged in activities or programmatic responsibilities over activities that qualify for certification described under the headings of management, research, and education given above. Candidates must have responsibility and decision-making authority of such magnitude as districtwide, regional, statewide, or national fisheries programs. Independent judgment and consequences of actions must be present.

### **Minimum Professional Development Requirements**

***(Will be required as of July 1, 2000)***

#### **Description and criteria**

Professional development is required of all Certified Fisheries Professionals (CFPs) to keep abreast of developments in the field and to ensure continued enhancement of knowledge and skills throughout the CFP's career. Consequently, a CFP must submit evidence of professional development activities to achieve and maintain certification.

A point system is used to evaluate professional development. Prior to initial certification as a CFP and every five (5) years thereafter, a CFP must submit evidence of continued activity and development by accumulating a minimum number of professional development quality points (PDQPs). Whereas a minimum number of PDQPs must be obtained in activity Categories I and II (continuing education), the

remaining PDQPs must be distributed among at least two (2) of the remaining three (3) activity categories. These categories and specific activities within the categories are listed below.

### **Category I. Continuing education—fisheries**

Includes subjects directly related to fisheries science or management. Examples include fisheries management, habitat management, fisheries economics, fish diseases, aquaculture or fish culture, fisheries policy and law, aquatic ecology, etc.

<b>Activities</b>	<b>PDQPs</b>
<b>Participation in short-courses or training programs sponsored or conducted by commercial organizations, professional organizations/agencies, employers, or universities</b>	<b>0.5 per hour of instruction</b>
<b>Attendance at annual or semiannual meetings or special conferences of professional societies, educational organizations, etc.</b>	<b>0.5 per hour of participation</b>
<b>Attendance at in-house meetings of employer involving education on new techniques or developments in the profession</b>	<b>0.5 per hour of participation</b>
<b>Completion of self-instruction audiovisuals</b>	<b>0.5 per hour of instruction</b>
<b>Attendance at seminars conducted by experts in the subject</b>	<b>0.5 per hour of instruction</b>

### **Category II. Continuing education—nonfisheries**

Includes subjects that are not primarily fisheries oriented but are professionally enriching to the individual. Examples include computer science and statistics, managerial and leadership skills, public speaking, problem-solving, public relations, marketing, planning, and other related natural resource disciplines such as forestry, wildlife, etc.

<b>Activities</b>	<b>PDQPs</b>
<b>Participation in short courses or training programs sponsored or conducted by commercial organizations, professional organizations/agencies, employers, or universities</b>	<b>0.5 per hour of instruction</b>
<b>Attendance at annual or semi-annual meetings or special conferences of professional societies, educational organizations, etc.</b>	<b>0.5 per hour of participation</b>
<b>Attendance at in-house meetings of employers involving education on new techniques or developments in the profession</b>	<b>0.5 per hour of participation</b>
<b>Completion of self-instruction audiovisuals</b>	<b>0.5 per hour of instruction</b>
<b>Attendance at seminars conducted by experts in the subject</b>	<b>0.5 per hour of instruction</b>

### Category III. Oral communications in fisheries and nonfisheries subjects

Includes the development, preparation, and presentation of activities such as those described in categories I and II. Context is any public meeting that is open to the general public or a select group of invited participants. For fisheries subjects, the audience need not be fisheries professionals. For nonfisheries subjects, the audience must be fisheries professionals. Multiple presentations of the same or similar subject matter can only be credited once during a certification renewal period.

<b>Activities</b>	<b>PDQPs</b>
Author/coauthor of an oral or poster presentation at a professional meeting	7
Author/coauthor of an oral or poster presentation to a nonprofessional audience	7
Organizer/instructor of a short course or workshop	20
Instructor of a quarter- or semester-length course	10 points per credit maximum 30
Author/producer of self-instruction audiovisuals in fisheries	20

### Category IV. Written communications

Developing, writing, editing, reviewing, and publishing fisheries-oriented materials. The written material need not be published, but it must be readily available to professional and nonprofessional audiences.

<b>Activities</b>	<b>PDQPs</b>
Author/coauthor of peer-reviewed article or book chapter	15
Author/coauthor of a book/monograph	30
Editor/coeditor of a book/monograph	15
Author/coauthor of non-peer-reviewed article in a magazine, brochure, newspaper, etc.	7
Author/coauthor of an agency publication or report	10
Reviewer or editor of an article that has been submitted for publication	3
Book reviewer for a professional publication	5

### Category V. Service

Involves membership and active participation in fisheries or aquatic professional societies and organizations, and community service that draws on the individual's professional expertise in fisheries. Community service may include contributions of professional expertise to civic groups, environmental organizations, government, etc. Points are given for each year served in multiple-year appointments.

Activities	PDQPs
Holding the highest office in an organization (including subdivisions), (e.g., president, director, chair, journal editor, etc.)	15
Holding the other offices in an organization (including subdivisions), (e.g., secretary, treasurer, associate editor, newsletter editor, Committee chair, etc.)	10
Committee member	4

### PDQP requirements (Will be required as of July 1, 2000)

PDQPs are required to both achieve and maintain status as a CFP. However, because only formal education is needed to achieve AFP status, PDQPs are not required. At the time of application for the initial CFP, the candidate must have accumulated 30 PDQPs during the previous 2 years. These must be accumulated in at least two of the five categories. To maintain CFP status, 100 PDQPs must be accumulated during the previous 5 years, and an application for certification renewal must be submitted during the fifth year after previous certification. The 100 PDQPs must be distributed among the five categories as follows:

Category I or II:	Minimum 35, maximum 60, combined
Category III:	Maximum 35
Category IV:	Maximum 35
Category V:	Maximum 35
Total:	Minimum 100

Professional development should be undertaken through various activities. The minimum requirement in Category I or II combined is to ensure that a portion of the PDQPs are acquired through continuing education as opposed to professional activities. The maximum requirements in the other categories ensure that some PDQPs are obtained in at least three categories. CFP applicants will be provided with a Professional Development Activity Form for documenting such activities for certification renewal. Notification of the need for certification renewal will be sent to each AFP and CFP not less than twelve (12) months prior to the renewal date. **Applicants are responsible for maintaining their own records and for verifying the accuracy of these records if requested to do so.** Copies of meeting agendas, certificates, registrations, etc. should be retained so they can be supplied if requested. Applicants are encouraged to document activities that they believe most clearly fit the criteria, up to a maximum of 125 points. While the AFS Professional Code of Ethics is operative in maintaining the integrity of documentation, the AFS may request verification to ensure process validity. Denial of certification renewal may be appealed to the Board of Appeals. The applicant should prepare an appeal only if additional information or further clarification of previously stated facts is provided.

Individuals who held the CFP designation for at least twenty (20) years (need not be consecutive) and who are employed less than full time or are retired, may request **emeritus status** through which they can maintain their CFP status without the renewal requirement.

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