



Training Program Information Guide and Expected Skills

Candidates for the Diplomate Certification Examination must have completed an approved Standard or Alternate Training Program with an emphasis on clinical veterinary nutrition. The publication requirement and an approved Credentials Application must also be satisfied. Training programs are approved by the ACVN Training Program Evaluation Committee and Executive Board. See the Official Application Procedures for more information.

Definitions of terms

Primary Mentor: The Primary Mentor must be a Diplomate of the American College of Veterinary Nutrition. For Alternate Training Programs only, a Diplomate of European College of Veterinary and Comparative Nutrition may also serve as Primary Mentor; in this case, an ACVN Diplomate must serve as co-mentor. The Primary Mentor is the training program director and is directly responsible for the day-to-day training of the resident. They are primarily responsible for selection of resident applicants, guidance and mentorship of trainees, and assessment and evaluation of trainees. The Primary Mentor endorses all relevant forms and documents as well as ensures that the trainee has completed all requirements of the program and of the ACVN.

Credentials: The totality of the requirements (clinical training, teaching, research) for sitting for the certification examination.

Tracks: 'Small' animal track covers those species commonly seen in a traditional small animal clinic (dogs, cats, birds, rodents, rabbits). 'Large' animal track covers those species commonly seen in a traditional large animal clinic or ambulatory practice (cattle, pigs, horses, small ruminants, camelids, wildlife). 'Comparative' species track covers both 'large' and 'small' categories, with approximately equal weight given by the certification examination.

Trainee and mentor expectations

Undertaking a residency training program in veterinary nutrition requires a significant investment in terms of commitment, time, travel, and money. The trainee is responsible for understanding and agreeing to all program and credentials requirements, and for ensuring that deadlines for submission of all fees and documents are met.

Likewise, mentors involved in resident training agree to certain provisions and expectations. The Primary Mentor is one of the most important people involved in the training of residents under ACVN guidelines, and must be an ACVN Diplomate (in the case of Alternate Training Programs, an ECVCN Diplomate serving as Primary Mentor together with an ACVN Diplomate as co-mentor is also acceptable). Primary Mentors may serve as such for only 3 trainees at one time. However, upon completion of the resident's Training Program (i.e., the Primary Mentor is no longer actively mentoring the resident), the resident is no longer considered a trainee of that mentor regardless of the stage of credentialing. Members of the Training Advisory Committee (described below) other than the Primary Mentor are not impacted by the maximum limit guideline.

Primary Mentors are ultimately responsible for all aspects of the Training Program. Primary Mentors must be familiar with and understand the training program guidelines and the credentials requirements. When submitting a Training Program Application, the mentor also assures and endorses the suitability of the training site(s); if not familiar with any secondary site, the Primary Mentor must visit the facility for proper evaluation.

Primary Mentors must be willing and able to guide and evaluate a trainee's progress in the areas of clinical, teaching, and research. They must be willing to assess and identify program or trainee problems and recommend changes or even terminate the program if necessary. Nothing in this Guide shall prevent a Primary Mentor from terminating mentorship of a resident at any time.

Lastly, it is required that Primary Mentors evaluate trainees and their progress in a standardized fashion at least annually, including review of case logs. In the case of an Alternate Training Program involving a secondary training location under the supervision of an ACVN Diplomate who is a member of the Training Advisory Committee, evaluation by the Primary Mentor shall include review of all case logs from the secondary location as well as all progress reports and evaluations from the other Diplomate. Progress reports, evaluations, and case logs are not regularly reviewed by ACVN, but should be available if requested. When the trainee submits the Credentials Application, the Primary Mentor is asked to attest in writing that all Training Program requirements have been satisfactorily completed.

Program requirements: Standard and Alternate Training Programs

Both standard and alternate training programs have the following requirements:

1. Clinical training must take place at a veterinary medical facility with a faculty/staff active in a variety of disciplines and specialties. The Primary Mentor must be an ACVN Diplomate (in the case of Alternate Training Programs, an ECVCN Diplomate serving as Primary Mentor together with an ACVN Diplomate as co-mentor is also acceptable). The facility must have diagnostic and therapeutic facilities consistent with the current standard of specialty care for the medical practice in which it is engaged, as well as access to the scientific literature. Board certified specialists in nutrition as well as other disciplines must be on-site and available for consultation. The program must also include on-going continuing education (this can include some combination of: journal club, morbidity and mortality rounds, and/or seminars).
2. Programs must be at least two years in length with at least 52 weeks of on-clinic time in a nutrition service (one week is at least 5 days of at least eight hours) under the direct supervision of the Primary Mentor (or in the case of a Standard or Alternate Training Program involving a secondary training location, an ACVN Diplomate who is a member of the Training Advisory Committee). *The trainee and the Mentor should be interactively and concurrently managing or consulting on cases on a daily basis during this time.* The Mentor need not personally examine each patient seen by the trainee, but must remain available for consultation. The remainder of the time spent in training (i.e. at least 12 additional months) will be spent in research activities, teaching, independent study, or additional clinical time. Ongoing, active mentorship is expected to continue beyond the required clinical weeks and throughout the remainder of the training program.

- a. In order to facilitate follow-up and continuity of care as well as provide an experience of immersion in a clinical nutrition training program, mentors and trainees are encouraged to schedule the required clinical training weeks as full-week periods as well as multi-week blocks when possible.
 - b. Programs must be completed within six years of initiation of training; longer programs are only allowed in the case of concurrent PhD training. Temporary suspension of the training program may occur after notification of ACVN.
3. Establishment of a 3-person Training Advisory Committee is required, and shall be headed by the Primary Mentor. The additional 2 members will be selected by the Primary Mentor and may assist in the selection of trainees and supervision of the training program. The committee may consist of other ACVN Diplomates and specialists from other colleges as well as individuals with pertinent PhD credentials as deemed appropriate by the Primary Mentor, although a member responsible for supervision of the trainee during any clinical week training at any secondary training location(s) shall be an ACVN Diplomate. In the case of Alternate Training Programs with Primary Mentors who are ECVCN Diplomates, an ACVN Diplomate serving as co-mentor must be part of the Committee.

Members need not be in active clinical practice at the same primary site as the Primary Mentor and trainee. The role of the Training Advisory Committee is to provide frequent consultation (including in-depth case review), support and guidance intended to enhance the trainee's academic and clinical education.

4. During training, it is required that the trainee maintain a case log as well as records of all veterinary nutrition activities and that the Primary Mentor review these records and conduct evaluations and progress reports at least annually.
5. **Clinical Training.** A minimum of 52 weeks of full-time on-clinic time focused in veterinary nutrition must be accomplished. Direct contact with the Primary Mentor (or in the case of an Alternate Training Program involving a secondary training location, another ACVN Diplomate who is a member of the Training Advisory Committee) in the form of daily discussion is expected; in-person as well as remote communications are acceptable. The specific nature of this contact should be specified in the program description. Managing the nutritional management aspects of cases while on other services is not adequate; only nutrition-focused service will be considered toward satisfying this requirement. This may include, depending upon the trainee's selected track, experience in the large or small animal nutrition clinics, in field service, and/or in extension activities with referring veterinarians.
 - a. Duties of trainees during large and small animal hospital rotations will include, but not necessarily be limited to, the following:
 - i. responsibility for the implementation and supervision of routine feeding programs for patients in the hospital;
 - ii. responsibility for management of a variety of nutrition cases, including assessment, implementation, monitoring and follow-up of patients receiving both enteral and parenteral nutrition;

- iii. responsibility for consultations with clinicians (and students if appropriate) on other specialty services, and in general practice, with respect to appropriate feeding regimens for individual patients. This may be accomplished by:
 - 1. attending daily rounds of various primary care services to discuss the nutritional aspects of the cases under consideration;
 - 2. consulting with referring veterinarians (by phone and/or written correspondence) with respect to appropriate nutritional management plans for individual patients.
 - b. Duties of trainees during field service rotations or extension activities will include, but not necessarily be limited to, the following:
 - i. set up feeding programs for herds, flocks, and colonies involved in herd health management programs under the supervision of the Field Service, including obtaining necessary feed data, ration formulation and monitoring of response;
 - ii. visit farms and facilities to assess nutritional problems and provide consultation to field service clinicians in the evaluation and management of such problems.
 - iii. if appropriate, act in a primary care capacity in the provision of nutritional guidance to owners using field services.
6. **Teaching.** Trainees must be involved in teaching to students, interns, residents, technicians, veterinarians, producers, and/or owners.
- a. Teaching should include informal clinical tutorials, such as daily rounds and other case discussions, as well as appropriate involvement in lecture courses and seminars.
 - b. Trainees will regularly attend and participate in seminars, rounds, and case conferences in nutrition, medicine, and surgery. Attending seminars and nutrition service rounds at a medical school or human hospital is also encouraged.
7. **Research.** Trainees should sufficiently utilize off-clinic time for research and independent study. Trainees will attend local, regional, or national nutrition meetings. It is strongly recommended that trainees conduct original research in the area of veterinary nutrition as part of the training program.

Note: In order to complete the requirements for becoming a Diplomate of ACVN, trainees must have conducted and published (as first or sole author) one original scientific report in the area of veterinary nutrition. The publication must have resulted from the trainee's research or clinical investigation. Unless the trainee has published this first-author refereed publication within 5 years of the deadline for submitting the credentials application, original research is expected to be part of residency training. Original research, retrospective studies, and prospective studies are examples of potentially

acceptable publications. Papers such as expanded abstracts, book chapters, proceedings, review articles, and case reports do not satisfy the publication requirement.

There are two options for nutrition training programs:

1. **Standard Program.** Standard Training Programs may train residents for one or more of the following tracks: small animal, large animal, and comparative. **Training Program Application** forms are available on the website and must be submitted electronically; fee \$250 at least 6 months before the start date of any resident. Programs must be approved prior to program initiation, as credit for time invested prior to program approval will not be considered.
 - a. After the program is approved, the Primary Mentor will need to submit an update electronically to the ACVN Secretary if any changes in the program are made. Modifications are subject to review and approval by the Training Program Evaluation Committee.
 - b. Standard Programs must be re-submitted to the ACVN Training Program Evaluation Committee every five years for evaluation and re-approval; fee \$125. Once approved for a five-year period, a Standard Training Program would not be subjected to any additional requirements which might be imposed by the College until the time of the five-year re-approval.
 - c. Within 90 days of program initiation, trainees must register with ACVN by submitting a **Resident Registration Form** (electronic submission; no fee).
2. **Alternate Program.** Alternate Training Programs require the same intensive dedication to the field of veterinary nutrition as standard programs. Rigorous clinical activities and scientific knowledge exploration under the guidance of a mentor are expected in any training program. It is not the intent of the Alternate Training Program option to provide a less intense experience, nor to provide a training program disassociated from appropriate mentorship. Trainees in an Alternate Training Program will receive equal training and mentorship as those in Standard Training Programs. Please see attached Expected Skills lists for more information.

At least 6 months prior to initiating any program, a **Training Program Application** must be submitted (electronic submission; fee \$250). Programs must be approved prior to program initiation, as credit for time invested prior to program approval will not be considered. The description of the program should provide sufficient detail such that the ACVN Training Program Evaluation Committee can effectively assess the proposed program, including specifics as to the interactions with the Mentor(s) and explanations of planned activities for both on-clinic and off-clinic time. Programs may train residents for any of the following tracks: small animal, large animal, and comparative. During the required 52 weeks of nutrition clinic time (see above), direct contact with the Primary Mentor (or in the case of a secondary training location, another ACVN Diplomate who is a member of the Training Advisory Committee) in the form of daily discussion is expected; in- person as well as remote communications are acceptable. The specific nature of this contact should be specified in the

program description. After approval by the Training Program Evaluation Committee, an alternate program would not be subjected to any additional requirements which might be imposed by the College at a future time.

Alternate Training Program residents shall spend the required 52 weeks of clinical training time **on the premises of the primary site with the Primary Mentor, unless a secondary training location is approved.** The trainee's secondary location, if any, must have an established and active nutrition clinic under the guidance of an ACVN Diplomate who is a member of the Training Advisory Committee. No more than 25% of the clinical training time (13 weeks) may be satisfied with receiving and consultation duties at the secondary site. Direct supervision under an ACVN Diplomate (or ECVCN Diplomate if serving as the Primary Mentor) is still required for the full 52 weeks of clinical training time (the trainee and the Mentor should be interactively and concurrently managing or consulting on cases on a daily basis). The Diplomate at the secondary location shall provide weekly progress reports to the Primary Mentor, as well as a performance evaluation at the completion of training at the secondary location.

- a. After the program is approved, the Primary Mentor will need to submit an update electronically to the ACVN Secretary if any changes in the program are made.
- b. Modifications are subject to review and approval by the Training Program Evaluation Committee.
- c. Within 90 days of program initiation, the trainee must register with ACVN by submitting a **Resident Registration Form** (electronic submission; no fee).

American College of Veterinary Nutrition



Expected Skills of ACVN Diplomates

Small Animal Track

- Competency in nutritional biochemistry
- Perform a detailed nutritional assessment on a patient
- Body condition scoring
- Request and interpret appropriate laboratory evaluation of animals to diagnose or manage nutrition-related problems and to monitor feeding plans
- Recognize physical and laboratory signs of nutritional deficiencies and excesses
- Formulate a balanced homemade diet
- Select appropriate form of nutrition support required in hospitalized patients
- Although caseloads will vary depending upon the training program, the trainee should have managed sufficient numbers of cases to be skilled in the selection, implementation, and management of cases with a variety of feeding tube types (eg, nasoenteral, esophagostomy, gastrostomy, jejunostomy).
- Although caseloads will vary depending upon the training program, the trainee should have managed sufficient numbers of cases to be skilled in the selection, formulation, implementation, and monitoring of parenteral nutrition cases (peripheral and central venous access).
- Manage common complications of parenteral and enteral nutrition
- Prescribe a nutritional profile, specific diets and feeding protocol that incorporates nutrient modifications necessary to help manage a variety of conditions that include, but are not limited to the following:

Diabetes	Portosystemic shunts
Obesity	Hepatic lipidosis
Hypertriglyceridemia	Hepatic failure
Inflammatory bowel disease	Developmental orthopedic disease
Intestinal resection/anastomosis	Idiopathic cystitis
Gastric dilatation/volvulus	Chronic renal failure
Acute vomiting and diarrhea	Glomerulonephritis
Short bowel syndrome	Urolithiasis (struvite, oxalate, urate)
Lymphangiectasia	Congestive heart failure
Food allergy	Cancer patient getting chemo or radiation
Pancreatitis	
- Monitor the progress of therapy, adjusting as necessary
- Pet food labeling and other regulatory issues
- Be able to critically evaluate the scientific literature and advertising claims
- Have a working knowledge of statistics

Large Animal Track

- Competency in nutritional biochemistry
- Perform a detailed nutritional assessment on a patient or herd/flock/colony
- Body condition scoring
- Request and interpret appropriate laboratory evaluation of animals to diagnose or manage nutrition-related problems and to monitor feeding plans
- Request appropriate laboratory evaluation of feeds to diagnose or manage nutrition related problems
- Recognize physical and laboratory signs of nutritional deficiencies and excesses
- Formulate a balanced ration for an individual or herd/flock
- Select appropriate form of nutrition support required in hospitalized patients
- Formulate and administer parenteral nutrition
- Select appropriate tube type
- Place nasogastric tubes
- Monitor patient receiving enteral nutrition
- Manage common complications of enteral nutrition
- Prescribe a ration and feeding protocol that incorporates nutrient modifications necessary to help manage a variety of conditions that include, but are not limited to the following:

Ruminant

Ketosis
Hypocalcemia
Hypomagnesemia
Hepatic lipidosis
Rumen Acidosis: acute and subacute
Abomasal ulcers, impactions and displacements
Selenium, copper and zinc deficiencies
Copper toxicosis
Urolithiasis
Starvation
Milk replacers for calves, lambs and pigs
Polioencephalomalacia

Equine

Periodic hyperkalemia
Tying-up syndrome
Developmental orthopedic disease
Hyperlipidemia
Starvation
Urolithiasis
Renal disease
Hepatic disease
Colic
Athletes: endurance on short-term maximal activity.
Acidosis
Milk replacers for foals

Bloat

- Monitor the progress of therapy, adjusting as necessary
- Feed labeling and other regulatory issues
- Be able to critically evaluate the scientific literature and advertising claims
- Have a working knowledge of statistics

Comparative Track

- Combination of the skills expected for both large and small animal tracks