

Executive Summary of CBPA-AS™ Practice Analysis



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INTRODUCTION

Recognizing the growing need for specialized, high-quality intervention for individuals diagnosed with autism spectrum disorder (ASD), the Autism Partnership Foundation (APF) explored the creation of credentialing programs that were aimed to promote a progressive approach to Applied Behavior Analysis (ABA) as a treatment method for ASD. The APF established the Progressive Behavior Analyst Autism Council® (PBAAC or the Council) which is responsible for governance and oversight of APF's suite of certification programs, policies, and procedures. The Council is an independent and autonomous body that is responsible for the certification program. The Council sets policy for essential certification activities and manages certification and recertification decisions, including, but not limited to governance, eligibility criteria, disciplinary and appeals actions, and the development, administration, and scoring of assessments.

APF and the Council acknowledges the importance of aligning all credentialing activities with industry standards and best practices. To guide this development process, APF collaborated with the ACT Credentialing & Career Services team. At various points in time, the team comprises recognized thought leaders and experts in credentialing advisory services, including Dr. Sandy Greenberg, Jacqueline Carpenito, Carla Caro, and Eric Vincent.

Credentialing initiatives commenced with strategic meetings, held both in-person and virtually, between APF and ACT. These sessions were designed to articulate the mission and vision of the envisioned multi-tiered certification program. A distinguished Advisory Committee, consisting of 11 members recognized as experts in progressive applied behavior analysis on both national and international levels, was assembled. Comprising thought leaders, researchers, consultants, academics, and clinical program directors, Advisory Committee members offered conceptual guidance and input throughout the development and validation process of the certification programs. This committee played a pivotal role in shaping the mission and vision statements and identifying potential certification levels.

The Mission and Vision statements below articulate APF's aspirations for certification in a clear and concise manner. They highlight the focus of APF's certification-related development and implementation initiatives. Additionally, these statements provide a basis for developing non-certification-related aspects of APF's strategic plan that complement the certification initiatives.

Mission Statement: Given the growing need to provide specialized, high-quality interventions for individuals 14 years of age or younger diagnosed with ASD, the Autism Partnership Foundation provides credentialing programs that promote a progressive approach to ABA as a treatment method. Governed by the Progressive Behavior Analysis Council, these programs are built on a rigorous and defensible combination of initial eligibility requirements, adherence to a Code of Ethics, assessments, and recertification requirements to recognize individuals who meet high standards of practice.

Vision Statement: To improve the quality of life for individuals diagnosed with ASD through the credentialing of professionals in a progressive approach to ABA.

The APF Advisory Committee initially partnered with ACT to establish the CPBA-AP® credential, targeting professionals operating at an advanced strategic level involved in educating and training other professionals. In December 2021, the committee continued fulfilling its mission by launching a comprehensive study in collaboration with ACT, examining the work of professionals overseeing interventionists implementing progressive ABA procedures in clinical settings. The study aimed to identify and validate the domains of responsibility and tasks performed, as well as the associated content areas and knowledge and skills essential for effective practice by these professionals. The objective was to develop the Certified Progressive Behavior Analyst-Autism Supervisor™ (CPBA-AS™) credential.

REPORT PURPOSE

This report summarizes a comprehensive practice analysis study of Autism Supervisors, that is, individuals who supervise interventionists and others working directly with individuals diagnosed with ASD. The study was designed to clarify the domains and tasks performed, as well as the content areas and knowledge and skills essential to practice. Meeting certification program accreditation standards from third-party accreditation entities necessitates a rigorous practice analysis study. Adherence to these standards guides the development of required assessments including the assessment content outline and proportional testing emphasis. Accordingly, the APF study collected data to create a detailed description of current practice, shaping the content outline for CPBA-AS assessments.

Conducting a practice analysis for a new credential involves a systematic approach to understanding and defining the necessary skills, knowledge, and competencies in the target field. This includes developing a draft delineation of the practice, outlining key elements and essential domains. Validation initiatives follow to ensure accuracy and relevance. The iterative process for a new practice incorporates insights from individuals operating at the intended credential level who offer diverse perspectives. This approach contributes to a nuanced understanding of the profession and ensures the credential reflects the evolving field. The practice analysis forms the foundation for shaping the credentialing program's content and structure, and guides assessment development. Approximately 65 subject matter experts contributed to the development and validation efforts, ensuring a thorough and inclusive process.

METHODOLOGY

The practice analysis study reported herein conforms to current testing and measurement requirements for the validation of certification examinations as found in the NCCA Standards for the Accreditation of Certification Programs (2021), the International Standards Organization (ISO) American National Standards Institute (ANSI), National Accreditation Board (ANAB), (ANSI 17024, 2012), as well as the AERA/APA/NCME Standards for Educational and Psychological Testing (2014).

To ensure a range of expertise from the field in the practice analysis activities, the Council and PBAAC staff implemented a nominations process in September 2021. Nominations were provided via a web survey hosted by ACT. Each nomination provided the following demographic and professional background information: name of nominee, contact information, employer name, years of experience training and supervising interventionists, years of experience implementing a progressive approach to ABA, ages of clients served, highest levels of formal education attained, and location of employment. As outlined below, the Advisory Committee reviewed the nominees, and subject-matter experts (SMEs) were chosen to serve on the task force, as independent reviewers, and as focus panelists. The appointment of the SMEs was designed to ensure that each cohort comprised a representative set of identified professional characteristics. Invitations were sent to selected SMEs with participation details.

1. In December 2021, PBAAC and ACT organized a meeting with members of the Advisory Committee to discuss the execution of a practice analysis supporting the development of a new credentialing program. This program aimed to credential individuals who clinically supervise and train interventionists implementing progressive ABA procedures. The resulting credential was to be named Certified Progressive Behavior Analyst—Autism Supervisor™ (CPBA-AS™). The work products previously completed by PBAAC and ACT to define the proposed target audience, as well as preliminary experience and education requirements, were carefully reviewed. The role of the Advisory Committee was to provide conceptual guidance throughout the study. During this meeting, the Advisory Committee structured the

study and methodology to include a series of face-to-face and virtual meetings involving multiple groups of SMEs. The chart below provides an outline of the dates, SME groups, and study activities for all cohort groups, including the Advisory Committee.

Date	SME Group	Activity
December 2021	Advisory Committee (n=13)	Approve of method, structure, and select additional panel members Review initial compilation of: <ul style="list-style-type: none"> • Domains and tasks within the domains • Content areas and knowledge and skills within content areas
January and February 2022	Task Force (n=11)	Edit initial draft of: <ul style="list-style-type: none"> • Domains and tasks within the domains • Content areas and knowledge and skills within content areas
February 2022	Independent Reviewers (n=11)	Independent review and recommended edits for: <ul style="list-style-type: none"> • Domains and tasks within the domains • Content areas and knowledge and skills within content areas
February and March 2022	Task Force	Reconciliation of consolidated input from independent reviewers to refine: <ul style="list-style-type: none"> • Domains and tasks within the domains • Content areas and knowledge and skills within content areas
March and April 2022	Focus Panels (2 panels; n=12)	Review domains, tasks, content areas, and knowledge and skills Rate task domains for: <ul style="list-style-type: none"> • Time spent • Importance to critical outcomes Allocation of task domains <ul style="list-style-type: none"> • Rank of tasks within domains
April 2022	Task Force	Reconciliation of input from focus panels to refine: <ul style="list-style-type: none"> • Domains and tasks within the domains • Content areas and knowledge and skills within content areas Link tasks to knowledge and skills
April 2022	Advisory Committee	Review of content, ratings, results, and linkage data Develop and recommend job content outline (JTA)

		Develop and recommend test content outline (TCO) review and recommend eligibility requirements
April 2022	PBAAC (Council)	Review recommendations and approve the finalized JTA content, linkage results, and TCO Review, modify, and approve eligibility requirements

ACT compiled an initial delineation of domains with tasks, as well as knowledge and skill statements organized into content areas, drawing from available industry materials, practice descriptions, education coursework, and related credentials. The Advisory Committee reviewed and refined these documents to create revised drafts. These documents formed the foundation for the subsequent iterative review and revision of the practice analysis delineation. Over the following months, ACT facilitated the reviews and revisions, providing feedback on potential adjustments.

2. On January 12, 2022, ACT led a virtual meeting with the 11 members of the Task Force to orient them to their responsibilities, as well as the method and workflow of the practice analysis study. Their initial charge was to review and refine the tasks and the knowledge and skills statements. Throughout January, a series of virtual meetings with the task force were conducted to edit the draft documents. Domains, tasks, content areas, knowledge, and skills were revised, deleted, added, and organized to accurately reflect current practice.
3. The Advisory Committee enlisted the expertise of 11 independent reviewers to enrich the diversity of input from SMEs. These reviewers, representing such various perspectives as researchers, academics, and clinical service providers, contributed to ensuring the accurate delineation of current practices for Autism Supervisors. In February 2021, ACT sent an email to each independent reviewer containing an overview of the practice analysis study, an orientation to the proposed target audience for the credential and the associated education and experience requirements, comprehensive instructions, and the procedure for completing their review. Furthermore, specific instructions on revising the documents, previously refined by the Task Force, and encompassing domains, tasks, content areas, knowledge, and skills, were provided. The reviewers then submitted their independent edits and feedback to ACT for compilation.
4. In February and March 2022, the Task Force reconvened through two-hour virtual meetings to assess the compilation of input from the independent reviewers. ACT led the facilitation of these meetings and documented the modifications made to the delineation. Task Force members considered the input and feedback, aiming to refine and enhance the content of the delineation documents. They worked collaboratively to incorporate additional perspectives on the completeness, accuracy, and clarity of individual tasks, as well as knowledge and skill statements. Throughout these sessions, efforts were made to improve the organization of tasks within domains and the arrangement of knowledge and skills within content areas.
5. To enhance the integration of insights and understanding from professionals operating at the intended credential level and to further refine the delineation, the Advisory Committee enlisted 12 SMEs to participate as focus panelists, divided into two separate virtual meetings. These focus panels meetings, conducted in April 2022, were facilitated by ACT, and included individuals who had not been previously

exposed to the delineation. Before each meeting, ACT sent out the delineation documents via email, along with an explanation of their content and organization into two distinct but interrelated groupings. Focus panelists were instructed to review the documents beforehand. At the outset of each meeting, panelists were provided with an orientation to the overall objectives of the certification program and the methodology of the study. This was followed by an explanation of their specific role in prioritizing the domains and tasks. Following a review of the delineation of domains and tasks, the panelists rated each domain on two scales:

- **Relative Time Spent:** The amount of time spent performing the tasks in the domain relative to that spent on the other domains.

Rating Scale

- 0 Not performed
- 1 Very small amount
- 2 Small amount
- 3 Moderate amount
- 5 Large amount
- 5 Very large amount

- **Importance to Critical Outcomes:** The significance of the domain to attaining critical job outcomes.

Rating Scale

- 0 Not performed
- 1 Not important
- 2 Somewhat important
- 3 Important
- 4 Very important
- 5 Extremely important

Panelists independently rated each domain on both scales and provided their ratings to the group for analysis and review. The criticality of the domains was calculated by multiplying the average ratings from each panelist on both scales. Subsequently, panelists were instructed to meticulously review the domains along with their tasks, indicating the proportion of weight that each domain represented in the overall practice. ACT recorded these domain weights in a spreadsheet to compute the relative weights for each domain across all panelists. Finally, panelists were asked to rank the tasks within each domain from most critical to least critical. ACT recorded these rankings to calculate the overall average rankings.

Throughout the meetings, panelists were prompted to share their thoughts on the delineation, eligibility requirements, the importance and utility of each domain, and whether the content was unique to progressive ABA. Focus panelists offered suggestions for enhancing the delineation with their input on the value of each domain. ACT compiled data from both meetings to calculate ratings, rankings, and domain weights across all focus panel participants. Please refer to Appendix 1 for quantitative results from the focus panelists.

- 6 On April 25, 2022, ACT organized an in-person meeting for the Task Force. The session commenced with an introduction to the credential development process, a recap of completed study steps, and a scrutiny of participants, methods, and the outcomes of the Focus Panel meetings. Subsequently, the Task Force evaluated the existing practice delineation for Autism Supervisors, ensuring clarity and accurate

representation. They further revised the flow and uniformity of the presentation, as well as the task, knowledge, and skill statements. These adjustments were made with the specific aim of enhancing their utility in the development of the intended credential.

During the review, members focused on reconciling feedback from all internal and external SMEs, ensuring that the delineation aligned with the Mission and Vision of the proposed credentialing program. They evaluated each statement based on two criteria:

- Was it *critical* to success?
- Was it within the scope of practice of an Autism Supervisor?

Finally, the members identified the key tasks in the delineation that should be considered for the development of a performance-based assessment.

- 7 The Advisory Committee met for a 1-day meeting on April 26, 2022, facilitated by ACT to complete the following activities:
 - Review the AS practice analysis method and results
 - Recommend AS practice analysis results and weighted content outline to the Council for review and approval. This included the domains and task statements along with the knowledge and skill statements organized into content areas
 - Prepare recommended test content outline for the CPBA-AS assessments based upon the results of the practice analysis study and the weighted content outline
 - Identify linkages between AS tasks and specific knowledge and skills
 - Review and recommend refined AS eligibility requirements

During the meeting, each committee member was tasked with rating the importance of each domain's representation in an assessment blueprint. Two rounds of ratings were collected—Round 1 followed by a discussion, and Round 2 for rerating—to validate the final assessment blueprint. In assigning ratings, the committee considered the ratings, including the criticality of each domain and its unique contribution to the implementation of progressive ABA. The outcome of this process yielded a weighted content outline of the domains.

Practice analysis results should be adjusted to ensure that the content of the test accurately reflects the knowledge, skills, and abilities required for the role being assessed. Addressing concerns related to achieving balanced coverage of content areas, avoiding overemphasis or neglect of specific topics, and creating a fair and comprehensive assessment aligned with current practices and profession requirements, the committee members arrived at the final test content outline to recommend to the Council. Rationales were provided regarding adjustments to the weights in the test content outline, specifically in the areas of Intervention, Training Others, and Professionalism. The results of the ratings and discussions are summarized and are the basis for the blueprint of the multiple-choice examination. Please see Appendix 2 for the quantitative results and the rationales provided by the advisory committee.

PRACTICE ANALYSIS DELINEATION AND FINAL ASSESSMENT BLUEPRINT REVIEW AND APPROVAL

On April 27, 2022, the Council gathered to finalize the practice delineation, consisting of seven domains, 39 tasks, and eleven associated content areas with 60 knowledge and skills. The objectives of the meetings were to:

- Review all internal and external SME feedback on the delineation.
- Finalize the content of the delineation for use in a comprehensive assessment blueprint.
- Examine the linkages between the knowledge and skills to tasks in the delineation.
- Identify potential assessment methods for each element in the delineation.
- Develop a comprehensive assessment blueprint to support a 2-part assessment program, including a multiple-choice examination and a performance-based examination.

Committee members conducted a comprehensive examination of each of the seven domains, and carefully documented the associated knowledge and skills. The table below presents the finalized list of domains along with the corresponding numbers of associated knowledge and skills.

Domains	# of Ks	# of Tasks
Domain 1: Performs initial and ongoing assessments in collaboration with clients and other relevant stakeholders	23	5
Domain 2: Designs and modifies intervention plans	50	6
Domain 3: Supervises cases	55	6
Domain 4: Delivers intervention when necessary	41	2
Domain 5: Trains staff delivering behavioral interventions	24	6
Domain 6: Trains and collaborates with others	37	5
Domain 7: Demonstrates Professionalism	24	9

The Council scrutinized the content outline, analyzed supporting data, and considered recommendations from the Advisory Committee. Council members evaluated the testable material in each domain. They addressed concerns regarding achieving balanced coverage of content areas, avoiding overemphasis or neglect of specific topics, and ensuring fair and comprehensive assessments aligned with current practices and professional requirements. Following the ratings and discussions, the Council finalized and approved the test content outline, which serves as the basis for the blueprint of the multiple-choice examination. See Appendix 3 for a comprehensive copy of the delineation.

Test Content Outline Domains	Exam Weights
Domain 1: Performs initial and ongoing assessments in collaboration with clients and other relevant stakeholders	10%
Domain 2: Designs and modifies intervention plans	19%
Domain 3: Supervises cases	19%
Domain 4: Delivers intervention when necessary	10%
Domain 5: Trains staff delivering behavioral interventions	18%
Domain 6: Trains and collaborates with others	12%
Domain 7: Demonstrates Professionalism	12%

Separately, the focus of the Competency Demonstration assessment, including the rubric and associated scoring categories and weightings, were derived from the mission and vision of the credentialing program—to recognize individuals who have the experience, knowledge, and skills necessary to provide competent training, supervision,

and oversight to professionals who implement behavioral intervention with individuals diagnosed with autism spectrum disorder (ASD). The candidates' skills evaluated in the performance assessment include:

- general approach to training
- feedback during training
- training technique/method
- focus of training
- clinical judgment

APPENDIX 1. FOCUS PANEL RATINGS, RANKINGS, AND DOMAIN WEIGHTS

Domains	SME1.1	SME1.2	SME1.3	SME1.4	SME1.5	SME1.6	SME1.7	SME2.1	SME2.2	SME2.3	SME2.4	SME2.5	MEAN
I. Assessments TIME	1	2	2	2	2	3	3	3	2	2	2	2	2.2
I. Assessments IMP	5	4	4	4	4	3	3	5	5	5	5	5	4.3
II. Plans TIME	4	4	4	4	4	4	4	5	4	3	4	3	3.9
II. Plans IMP	4	4	5	4	4	5	5	5	5	5	5	5	4.7
III. Supervises TIME	4	5	4	4	5	4	4	4	4	4	3	3	4.0
III. Supervises IMP	5	5	5	5	5	5	4	5	4	5	4	4	4.7
IV. Intervention TIME	1	1	1	1	1	0	1	5	3	3	2	2	1.8
IV. Intervention IMP	3	3	3	3	3	0	3	5	5	4	5	3	3.3
V. Trains Interventionists TIME	4	4	4	5	4	4	3	3	4	4	4	4	3.9
V. Trains Interventionists IMP	4	4	4	5	5	4	4	5	5	5	5	4	4.5
VI. Trains Others TIME	2	2	2	1	3	2	2	3	3	3	3	3	2.4
VI. Trains Others IMP	3	4	3	3	4	3	4	4	4	4	4	4	3.7
VII. Professionalism TIME	2	4	3	5	3	5	5	4	4	5	4	3	3.9
VII. Professionalism IMP	5	4	4	5	5	5	5	5	4	5	5	5	4.8

Domains	SME1.1	SME1.2	SME1.3	SME1.4	SME1.5	SME1.6	SME1.7	SME2.1	SME2.2	SME2.3	SME2.4	SME2.5	MEAN	RANK
I. Assessments	10	15	10	15	10	15	25	20	15	10	20	15	15	3
II. Plans	20	20	20	20	20	20	20	20	20	15	20	20	19.58	1
III. Supervises	15	20	20	10	20	15	10	5	15	15	20	10	14.58	4
IV. Intervention	20	5	5	10	5	5	0	15	10	10	10	15	9.167	7
V. Trains Interventionists	20	20	35	20	20	20	20	10	10	20	20	15	19.17	1
VI. Trains Others	5	15	5	15	15	15	15	10	20	10	5	15	12.08	5
VII. Professionalism	10	5	5	10	10	10	10	20	10	20	5	10	10.42	6
													100	

Domains	Time Spent	Importance	Crit Total	Rel Weight	Rank
I. Assessments	2.2	4.3	9.4	10	5
II. Plans	3.9	4.7	18.3	19	1
III. Supervises	4.0	4.7	18.7	19	1
IV. Intervention	1.8	3.3	5.8	6	7
V. Trains Interventionists	3.9	4.5	17.6	18	4
VI. Trains Others	2.4	3.7	8.9	9	6
VII. Professionalism	3.9	4.8	18.6	19	1
			97.3	100	

APPENDIX 2. ADVISORY COMMITTEE RANKINGS, DOMAIN WEIGHTS, AND RATIONALE

Advisory Committee Rankings and Domain Weights

Domains	Time Spent	Importance	Crit Total	Relative Weight	Rank	Practice Content Outline Weights	Test Content Outline Weights
I. Assessments	2.2	4.3	9.4	10%	5	10%	10%
II. Plans	3.9	4.7	18.3	19%	1	19%	19%
III. Supervises	4.0	4.7	18.7	19%	1	19%	19%
IV. Intervention	1.8	3.3	5.8	6%	7	6%	10%
V. Trains Interventionists	3.9	4.5	17.6	18%	4	18%	18%
VI. Trains Others	2.4	3.7	8.9	9%	6	9%	12%
VII. Professionalism	3.9	4.8	18.6	19%	1	19%	12%
			97.3	100%		100%	100%

Rationale for Final Test Content Outline Weights

Domains	Test Content Outline Weight Adjustment	Rationale
IV. Intervention	Increase 4%	Supervisors must be able to perform intervention themselves as a foundation for supervision and training tasks
VI. Trains Others	Increase 3%	Includes a focus on communications with clients and training of other ABAs
VII. Professionalism	Decrease 7%	The content is less testable and is partially addressed through eligibility and code of ethics attestation.

APPENDIX 3. CPBA-AS™ TEST CONTENT OUTLINE

The seven domains and the percentage of questions allocated to each area that are included in the examination are as follows:

Domains and Tasks

01. Performs initial and ongoing assessments in collaboration with clients and other relevant stakeholders (10% of assessment)
01.01 Evaluates client records, reports, and inputs that comprise a comprehensive case history.
01.02 Conducts client interviews when possible, interviews other care providers and caregivers, and directly observes clients to gather history and programmatic preferences.
01.03 Selects assessments using relevant factors such as setting, case history, current assessment information, client characteristics, best practices, and relevant research.
01.04 Conducts a variety of direct and indirect assessments to identify areas for improvement, areas of strength, and a comprehensive overview of the client.
01.05 Uses assessments and client preferences to inform a starting point for intervention plans and modifies those plans based on in-the-moment analysis and clinical judgment.
02. Designs and modifies intervention plans (19% of assessment)
02.01 Designs short and long-term interventions that are effective, compassionate, culturally responsive, and socially significant based upon relevant, evidence-based research and assessment results.
02.02 Evaluates the necessity of intervention modification.
02.03 Modifies interventions based upon relevant information (e.g., objective data, in-the-moment analysis, client and caregiver preferences).
02.04 Plans for and implements procedures to promote maintenance and generalization in a variety of contexts.
02.05 Creates graphical representations of data to help inform intervention decisions.
02.06 Selects efficient and effective data collection practices.
03. Supervises cases (19% of assessment)
03.01 Analyzes client data to determine progress, regression, lack of progress, and variability.
03.02 Directly observes the intervention team to ensure client progress and implementation fidelity.
03.03 Provides guidance and feedback to ensure the intervention team is implementing the curriculum as designed and progressing toward terminal goals.
03.04 Communicates and documents assessment results, updates to the intervention plan, and progress toward terminal goals.
03.05 Ensures the curriculum is progressing toward and is aligned with intervention plan goals.
03.06 Participates in collaborative consultation with caregivers and other allied professionals to address various challenges and ensure quality of care.
04. Delivers intervention when necessary (10% of assessment)
04.01 Implements effective, compassionate, culturally responsive, socially significant, and evidence-based behavioral strategies.
04.02 Interprets data and graphs within and across sessions to inform intervention decisions.
05. Trains staff delivering behavioral interventions (18% of assessment)

05.01	Evaluates and documents professional development needs (e.g., implementation of procedures, intervention plans, soft skills, understanding of ASD) by identifying and prioritizing targets for skill refinement through direct and indirect observation of staff.
05.02	Evaluates and develops the clinical judgment of staff.
05.03	Develops training plans and procedures that are effective, compassionate, culturally responsive, scientifically supported, and evidenced-based.
05.04	Provides training for staff across behavioral and instructional programming.
05.05	Provides feedback to staff to enhance intervention effectiveness while taking into consideration the staff's preferred feedback style.
05.06	Adjusts training plan and procedures based on relevant contextual factors (e.g., objective data, in-the-moment analysis, input from trainee) impacting the effectiveness of the training procedures.
06.	Trains and collaborates with others (12% of assessment)
06.01	Collaborates and coordinates with clients in the selection of goals and procedures to reach desired outcomes.
06.02	Collaborates, coordinates, and trains caregivers and family members to provide each client a comprehensive, quality intervention program.
06.03	Collaborates, coordinates, and trains other allied professionals and agency members to provide each client a comprehensive, quality intervention program.
06.04	Collaborates, coordinates, and trains other behavior analysts.
06.05	Participates in collaborative consultations to address intervention barriers and to ensure a comprehensive, quality intervention program.
07.	Demonstrates Professionalism (12% of assessment)
07.01	Maintains relevant PBAAC certification(s).
07.02	Participates in the advancement of the profession and practice through involvement in committee(s), the community, and other opportunities.
07.03	Operates within the scope of practice of a CPBA–AS.
07.04	Operates within one's own area(s) of competence and refers out to qualified professionals when appropriate.
07.05	Acknowledges, validates, and collaboratively considers the expertise of others.
07.06	Engages in ethical and responsible behavior consistent with the CPBA-AS Code of Ethics.
07.07	Demonstrates professionalism during feedback exchanges.
07.08	Engages in socially valid and culturally responsive behaviors (e.g., statements, practices) when interacting with others across contexts.
07.09	Engages in ethical decision making by analyzing relevant contextual variables and employing effective problem solving.

Content Areas, Categories, and Knowledge/Skills

01. Content Area 1: Principles, concepts, and history of behavior analysis
01.01. Basic Concepts
01.01.01 Dimensions of ABA.
01.01.02 Basic elements of behavioral contingencies (e.g., antecedent, behavior, consequence).
01.01.03 Basic principles of behavior analysis (e.g., reinforcement, extinction, stimulus control).

01.01.04	Major components of social and experimental validity and how they relate to clinical practice.
01.01.05	Major distinctions between behavior analysis and other fields of psychology (e.g., gestalt psychology, cognitive psychology, Freudian psychology).
01.02. Foundations of Behaviorism	
01.02.01	Founders of behaviorism (e.g., Jones, Skinner, Thorndike).
01.02.02	Major contributions of the founders of behaviorism.
01.03. Foundations of Applied Behavior Analysis	
01.03.01	Major contributions of the founders of ABA (e.g., Baer, Sulzer-Azaroff, Wolf).
01.03.02	Foundational and pertinent literature as it relates to the development of ABA-based methods and procedures.
02. Content Area 2: Foundational knowledge of autism and interventions	
02.01. Diagnostic and Statistical Manual of Mental Disorders and Diagnosis	
02.01.01	Diagnostic criteria for ASD according to the current Diagnostic and Statistical Manual of Mental Disorders/International Classification of Diseases and comparison of ASD with other developmental disabilities.
02.01.02	Methods to supervise and adjust programming based on comorbidity.
02.01.03	Diagnostic and behavioral differences between sexes, genders, and age across the autism spectrum.
02.02. Etiology and Seminal Studies in Autism	
02.02.01	Major evidence and non-evidence-based theories of ASD etiology.
02.02.02	Foundational and pertinent literature as it relates to autism as a diagnosis and ABA-based interventions.
02.02.03	Results, claims, limitations, ethical concerns, and harm of false claims (e.g., vaccines, psychogenic theories, epidural) as they relate to autism.
02.03. Assessments	
02.03.01	Assessment types (e.g., norm- or criterion-referenced, anecdotal, function-based) and content areas (e.g., intellectual, cognitive, behavioral, social) that are most appropriate for use with each client.
02.03.02	Qualities that make an assessment appropriate for a given context (e.g., validity, reliability, age appropriateness).
02.03.03	Assessment results that are most appropriate to inform the intervention of behavior for each client.
02.04. Intervention Evaluation	
02.04.01	Differences between scientific, pseudoscientific, and antiscientific procedures currently available as intervention alternatives.
02.04.02	Processes to promote the most effective, efficient, and ethical practices for the benefit of the client.
02.04.03	Ethical processes when non-evidence-based procedures are included in an intervention plan.
02.04.04	Variables impacting individualized intervention intensity (i.e., dosage).
02.04.05	Quality of evidence that is used to inform the selection of the most supported intervention.
02.05. Caregivers and Siblings	

02.05.01	Advantages and disadvantages of the major roles family members and caregivers could play within the course of ABA-based intervention.
02.05.02	Common outcomes of caregivers (e.g., financial, family dynamics, understanding and connecting with beneficial resources).
02.05.03	Common outcomes of siblings (e.g., resilience, self-competence, isolation).
02.06. Quality Learning Environments	
02.06.01	Key elements of successfully collaborating across multiple learning environments (e.g., creating a behavioral culture, developing collaborative relationship, being an active listener).
02.06.02	Key components of a quality learning environment (e.g., high rates of reinforcement, meaningful curriculum, ongoing supervision and training).
02.06.03	Key attributes of quality teaching (e.g., systematic, adaptable, collaborative).
02.06.04	Challenges with implementing a progressive approach to ABA and services when collaborating across multiple learning environments.
02.06.05	Possible challenges that professionals in multiple learning environments face as it relates to ABA-based intervention (e.g., policies, assigned staff, existing culture).
03. Content Area 3: Respondent behavior and conditioning	
03.01. Basic Concepts	
03.01.01	Components of respondent conditioning.
03.01.02	Possible operant and respondent variables controlling behavior.
03.01.03	Respondent procedure(s) that should be implemented based upon relevant contextual variables.
03.02. Acquisition and Extinction	
03.02.01	Components of respondent acquisition.
03.02.02	Components of respondent extinction.
03.02.03	Application of respondent acquisition.
03.02.04	Application of respondent extinction.
03.03. Respondent Conditioning Procedures	
03.03.01	Components and steps of respondent conditioning procedures (e.g., graduated exposure, systematic desensitization, flooding).
03.03.02	Application of respondent conditioning procedures (e.g., graduated exposure, systematic desensitization, flooding).
03.03.03	Conditions under which respondent conditioning procedures may be more preferred or appropriate.
03.04. Generalization	
03.04.01	Characteristics of respondent generalization.
03.04.02	Application of respondent generalization.
04. Content Area 4: Operant behavior and contingency arrangement	
04.01. Basic Concepts	
04.01.01	Components of operant conditioning.
04.01.02	Variables that contribute to the effectiveness of reinforcement-based procedures (e.g., motivating operations, timing, response effort).
04.01.03	Major considerations in providing putative reinforcement (e.g., age, individually determined, consistent) and why they are important.

04.02. Identifying Reinforcers
04.02.01 Methods of progressive (e.g., in-the-moment reinforcer analysis) and conventional approaches (e.g., multiple stimulus without replacement, paired stimulus preference assessment) to identifying possible reinforcers.
04.02.02 Critical variables that influence the selection of possible reinforcers.
04.02.03 Components of methods designed to identify possible reinforcers (e.g., observing vocal and non-vocal behavior, providing opportunities to sample a variety of stimuli).
04.02.04 Conditions under which a specific reinforcer identification method may be more preferred or appropriate.
04.03. Conditioning Reinforcement
04.03.01 Importance of conditioning new, novel, and a variety of reinforcers.
04.03.02 Components of conditioning stimuli to potentially function as reinforcers (e.g., engaging in favorable affect, demonstrating novel ways to interact with the stimuli, incorporating individual preferences).
04.03.03 Application of conditioning procedures (e.g., engaging in favorable affect, demonstrating novel ways to interact with the stimuli, incorporating individual preferences).
04.03.04 Conditions under which a specific conditioning method may be more preferred or appropriate.
04.04. Graduated Reinforcement
04.04.01 Components of graduated reinforcement procedures (e.g., quality, quantity, intensity).
04.04.02 Application of graduated reinforcement procedures (e.g., quality, quantity, intensity).
04.04.03 Progressive and conventional approaches to the use of graduated reinforcement.
04.04.04 Conditions under which a specific graduated reinforcement procedure may be more preferred or appropriate.
04.05. Schedules of Reinforcement
04.05.01 Schedules of reinforcement (e.g., fixed, variable, mixed).
04.05.02 Application of schedules of reinforcement (e.g., interval, compound, concurrent).
04.05.03 Ways to thin schedules of reinforcement, shift control to naturally available reinforcers, and fade the use of supplemental reinforcement.
04.05.04 Behavioral patterns of different schedules of reinforcement.
04.05.05 Conditions under which a specific schedule of reinforcement may be more preferred or appropriate.
04.06. Punishment
04.06.01 Considerations in the use of punishment-based procedures (e.g., immediacy, consistency, intensity).
04.06.02 Range (i.e., low- to high-intensity) of possible punishers based on relevant contextual variables.
04.06.03 Aversive procedures (e.g., corporal punishment versus non-corporal punishment) and the controversy surrounding their use (e.g., push to eliminate punishment in practice).
04.06.04 Punishment-based procedure implementation that is documented, effective, ethical, and designed to minimize negative side effects.
04.06.05 Implementation of punishment-based procedures based on established guidelines (e.g., immediacy, contingent, intensity).
04.06.06 Current perspectives on the use of punishment-based procedures.

04.07. Contingency Systems
04.07.01 Contingency systems (e.g., level system, token economy, response cost).
04.07.02 Components of contingency systems.
04.07.03 Application of contingency systems.
04.07.04 Progressive and conventional approaches to the use of contingency systems.
04.07.05 Conditions under which a specific contingency system may be more preferred or appropriate.
05. Content Area 5: Principles and dynamic application of behavioral tools
05.01. General Teaching
05.01.01 Interventions that ensure maximum learning opportunities.
05.01.02 Methods used to break skills down into their contextually relevant and necessary component parts.
05.01.03 Systematic development of skills.
05.01.04 Methods to promote generalization of acquired skills/behaviors.
05.02. Prompting and Flexible Prompt Fading
05.02.01 Prompting systems (e.g., flexible prompt fading, most-to-least, constant time delay) as they relate to ABA-based intervention.
05.02.02 Prompt types (e.g., model, positional, physical) as they relate to ABA-based intervention.
05.02.03 Challenges and methods to minimize prompt dependency.
05.02.04 Inadvertent prompts and their potential negative impact.
05.02.05 Application of prompting systems.
05.02.06 Progressive (i.e., flexible prompt fading) and conventional (e.g., most-to-least) approaches to prompting.
05.02.07 Strengths and limitations of prompting systems (e.g., flexible prompt fading, most-to-least, constant time delay).
05.02.08 Considerations for selecting prompting and/or shaping.
05.02.09 Conditions under which a prompt type or system may be more preferred or appropriate.
05.03. Shaping
05.03.01 Components of a progressive approach to shaping (e.g., identifying next targets, increasing variability, expanding response classes).
05.03.02 Application of shaping (e.g., identifying next targets, increasing variability, expanding response classes).
05.03.03 Progressive and conventional approaches to shaping.
05.03.04 Conditions under which shaping may be more preferred or appropriate.
05.04. Task Analysis
05.04.01 Components of a task analysis for a given skill (e.g., self-help, daily living, social).
05.04.02 Application of task analyses.
05.04.03 Methods to create a task analysis (e.g., watch an expert, complete task yourself)
05.05. Chaining Procedures
05.05.01 Types of chaining procedures (e.g., forward, backward, whole task).
05.05.02 Application of chaining procedures.

05.05.03	Conditions under which a specific chaining procedure may be more preferred or appropriate.
06. Content Area 6: Progressive teaching procedures and approaches	
06.01. Discrete Trial Teaching (DTT)	
06.01.01	Components of a progressive approach to DTT (e.g., varied language/instructions, flexible rotation of stimuli, shaping attending).
06.01.02	Application of progressive and conventional approaches to DTT.
06.01.03	Data collection procedures when implementing DTT based on relevant contextual variables.
06.01.04	Rationales for the components of a progressive approach to DTT (e.g., instructive feedback, flexible prompt fading).
06.01.05	Successive targets within the instructional period based on observation of current performance (e.g., success rate, attending, novelty).
06.02. Cool versus Not Cool (CNC) Procedure	
06.02.01	Components of the CNC procedure (e.g., correct and incorrect demonstrations, role-play, reinforcement).
06.02.02	Application of the CNC procedure.
06.02.03	Conditions under which the CNC procedure may be more preferred or appropriate.
06.03. Teaching Interaction Procedure (TIP)	
06.03.01	Components of the TIP (e.g., rationale, correct and incorrect demonstrations, role-play).
06.03.02	Application of the TIP.
06.03.03	Conditions under which the TIP may be more preferred or appropriate.
06.04. Incidental Teaching	
06.04.01	Components of incidental teaching (e.g., arranging the environment, following the client's lead, withholding access to potential reinforcers).
06.04.02	Application of incidental teaching.
06.04.03	Conditions under which incidental teaching may be more preferred or appropriate.
06.05. Observational Learning Methods	
06.05.01	Components of observational learning methods (e.g., observing a peer, providing reinforcement for engaging in similar behavior, vicarious punishment).
06.05.02	Application of observational learning methods.
06.05.03	Observational learning methods compared to other similar interventions (e.g., behavioral skills training).
06.05.04	Conditions under which observational learning methods may be more preferred or appropriate.
06.06. Group Instruction	
06.06.01	Key components of providing effective group instruction.
06.06.02	Application of group instruction.
06.06.03	Progressive and conventional approaches to group instruction.
06.06.04	Roles (e.g., group leader, shadow support) and responsibilities (e.g., reinforcement, prompting, teaching) when implementing group instruction.
06.06.05	Teaching methods implemented within group instruction (e.g., choral responding, TIP, CNC procedure).

06.06.06 Application of group instruction.
06.06.07 Conditions under which group instruction may be more preferred or appropriate.
06.07. Clinical Judgment
06.07.01 Components of a progressive approach to ABA.
06.07.02 Procedures, results, limitations, and contributions of foundational and current pertinent literature on a progressive approach to ABA (e.g., Leaf et al., 2016; Lovaas, 1987)
06.07.03 Components of clinical judgment.
07. Content Area 7: Curriculum
07.01. Curriculum Knowledge, Design, and Implementation
07.01.01 Curriculum priorities based on key considerations (e.g., areas of strength, areas of need, learner preferences).
07.01.02 Scope and sequence of curriculum and curriculum goals.
07.01.03 Staff skills needed to implement programs within a particular curriculum.
07.01.04 Social, cultural, and developmental norms when designing curriculum.
07.01.05 Conventional and progressive approaches to designing curriculum.
07.01.06 Rationales for short (e.g., micro, small picture) and long-term (e.g., macro, big picture) goals.
07.01.07 Methods to facilitate generalization of behavior change to new contexts.
07.02. Learning how to learn
07.02.01 Key components and prerequisites of learning-how-to-learn programs (e.g., responsiveness to contingencies, attention, tolerance of adversity).
07.02.02 Conditions under which refinements are necessary to learning-how-to-learn programs.
07.02.03 Clients' current strength and weakness with respect to learning how to learn.
07.03. Academic
07.03.01 Key components and pre-requisites for academic programs.
07.03.02 Conditions under which refinements are necessary to academic skills programs.
07.03.03 Clients' current strength and weakness with respect to academic programs.
07.04. Language
07.04.01 Key components and prerequisites for language programs (e.g., expressive and receptive language, matching, non-verbal imitation).
07.04.02 Conditions under which refinements are necessary to language programs.
07.04.03 Clients' current strength and weakness with respect to language programs.
07.05. Self-Help/Daily Living
07.05.01 Key components and pre-requisites of self-help/daily living programs (e.g., brushing teeth, making bed, showering).
07.05.02 Conditions under which refinements are necessary to self-help/daily living programs.
07.05.03 Clients' current strength and weakness with respect to self-help/daily living programs.
07.06. Social
07.06.01 Key components and prerequisites of social skills programs (e.g., sharing, turn-taking, inviting a peer to join an activity).
07.06.02 Conditions under which refinements are necessary to social skills programs.
07.06.03 Clients' current strength and weakness with respect to social skills programs.
07.07. Recreational and Leisure
07.07.01 Key components and pre-requisites of recreational and leisure programs.

07.07.02	Client preferences and skills necessary to make decisions about leisure activities.
07.07.03	Developmental norms, age, and peer group appropriateness.
07.07.04	Conditions under which refinements are necessary to recreation and leisure skills programs.
07.07.05	Clients' current strength and weakness with respect to recreational and leisure programs.
08. Content Area 8: Intervention Planning Components	
08.01. Basic Concepts of Behavior Intervention and Support	
08.01.01	Proactive and reactive approaches to decreasing the probability of behavior.
08.01.02	ABA-based procedures and methods consistent with the least restrictive, yet most effective and efficient intervention.
08.01.03	Rationales for the importance of including restrictive programming options in the continuum of approaches to intervening with problem behavior (e.g., Bannerman et al., 1990).
08.02. Functional Behavior Assessment (FBA)	
08.02.01	Variables that can influence the occurrence of a behavior (e.g., escaping demands, gaining attention, unconditioned stimuli [respondent behavior]).
08.02.02	Components of an FBA (e.g., interviews, observation, functional analysis).
08.02.03	Approaches to functional analyses (e.g., Iwata et al. 1982/1994, practical functional assessment, brief functional analysis).
08.02.04	Application of FBA (e.g., inform recommendations for behavior plan, determine functional replacement skills).
08.02.05	Conditions under which different methods of FBAs and functional analyses are more appropriate or preferred.
08.03. Functional Replacement Skills	
08.03.01	Skill(s) to teach based upon behavior function and goals (e.g., functional communication training).
08.03.02	Application of interventions designed to develop functional replacement skills.
08.04. Antecedent-Based Procedures	
08.04.01	Antecedent-based procedures (e.g., restricting access, reducing demands, making accommodations).
08.04.02	Application of antecedent-based procedures.
08.05. Differential Reinforcement Procedures	
08.05.01	Components of differential reinforcement procedures (e.g., differential reinforcement of high rates of behavior [DRH], differential reinforcement of other behavior [DRO], differential reinforcement of alternative behavior [DRA]).
08.05.02	Application of differential reinforcement procedures (e.g., DRH, DRA, DRO).
08.05.03	Conditions under which specific differential reinforcement procedures are more appropriate or preferred.
08.06. Extinction	
08.06.01	Components, advantages, and disadvantages of extinction-based procedures.
08.06.02	Application of extinction-based procedures.
08.06.03	Conditions under which to implement extinction-based procedures and methods to mitigate possible negative side effects.

08.07. Response Cost
08.07.01 Components, advantages, and disadvantages of response cost.
08.07.02 Application of response cost.
08.07.03 Conditions under which to implement response cost and methods to mitigate possible negative side effects.
08.08. Time-In
08.08.01 Components, advantages, and disadvantages of time-in procedures.
08.08.02 Application of time-in procedures.
08.08.03 Conditions under which to implement time-in and methods to mitigate possible negative side effects.
08.09. Time-Out
08.09.01 Components, advantages, and disadvantages of time-out procedures.
08.09.02 Application of time-out procedures.
08.09.03 Conditions under which to implement time-out and methods to mitigate possible negative side effects.
08.10. De-Escalation Strategies
08.10.01 Phases of the escalation cycle.
08.10.02 Decision-making at each phase of the escalation cycle.
08.10.03 Conditions under which to implement de-escalation strategies.
08.10.04 Environmental factors that promote de-escalation.
08.10.05 Methods to evaluate the implementation of a de-escalation plan.
08.10.06 Communications needed when implementing de-escalation strategies.
08.10.07 Differentiates between interruptive and reductive procedures.
09. Content Area 9: Preparation Decision-Making and Analysis
09.01. General Application
09.01.01 Necessary methods to prepare for a successful teaching session (e.g., having all possible reinforcers, toys, and materials in working order, environmental set up conducive to learning).
09.01.02 Components of a successful teaching session (e.g., maximizing teaching time, balancing alternation of work and free time).
09.01.03 Teaching session analysis and necessary changes to maximize progress.
09.02. Data
09.02.01 Strengths and limitations of data collection procedures (e.g., discontinuous, continuous, estimation) and the conditions under which each may be preferred or appropriate.
09.02.02 Application of data collection procedures (e.g., discontinuous, continuous, estimation).
10. Content Area 10: Training and Supervision
10.01. Training and Supervision
10.01.01 Potential training and supervision goals based on staff skill level and other relevant contextual variables.
10.01.02 Effective approaches to staff training and supervision (e.g., quality components of research-based models of adult learning, TIP, behavioral skills training).
10.01.03 Prescriptive and nonprescriptive models of staff training and supervision under varying circumstances.

10.01.04	Effective training and supervision tailored to a variety of instructional methods, client and staff demographics, and programming goals.
10.01.05	Methods to train and supervise others on the application of respondent conditioning procedures.
10.01.06	Methods to train and supervise others to implement contingency-focused and responsive procedures with clients.
10.01.07	Methods to train and supervise others to implement principles and dynamic application of basic behavioral tools.
10.01.08	Methods to train and supervise others to implement progressive teaching procedures.
10.01.09	Methods to train and supervise others to implement individualized behavior intervention plans.
10.01.010	Methods to evaluate if training of others is conducted in a manner that is culturally sensitive to the trainee and client.
11.	Content Area 11: Collaboration, Clinical Skills, Sensitivity, and Ethics
11.01.	Ethics
11.01.01	Components of the Progressive Behavior Analyst Autism Council (PBAAC) Code of Ethics.
11.01.02	Signal detection (i.e., identify variables that contribute to ethical dilemmas) as it relates to ethical contexts.
11.01.03	Common ethical errors and appropriate remedies.
11.01.04	The role of a human rights committee.
11.02.	Socially Valid Outcomes
11.02.01	Characteristics of socially valid outcomes (e.g., meaningful, long lasting, improves quality life).
11.02.02	Methods for assessing the social validity of a program or procedure (e.g., survey, interviews, rating scales).
11.02.03	Curriculum design with selection of goals that are socially valid to the relevant stakeholders.
11.02.04	Procedures that are socially valid to the relevant stakeholders.
11.03.	Cultural Responsivity
11.03.01	Cultural diversity, responsivity, and sensitivity.
11.03.02	Differing cultural variables (e.g., nationality, age, socio-economic status) and how they affect intervention decisions and necessitate adjustments in clinical work.
11.03.03	Interactions consistent with cultural humility.
11.03.04	Cultural differences and how they might impact clinical decisions.
11.03.05	Implicit bias, its effects, and how to mitigate implicit bias.
11.03.06	Neurodiversity and challenges/concerns facing the autistic community.
11.04.	Caregiver Support
11.04.01	Methods to discriminate among caregiver support, education, and training.
11.04.02	Components of caregiver support (e.g., affirmation, receptivity, follow-up questions).
11.04.03	Components of professional behavior (e.g., affect, punctuality, demeanor) that strengthen or weaken relationships with caregivers.
11.04.04	Methods to evaluate caregiver training (e.g., modeling, asking open ended questions, being clinically sensitive).

11.04.05	Methods to identify goals for caregivers outside of formal teaching, (e.g., collaborating with caregivers in the process of learning goal identification, direct observation).
11.05.	Professional Collaboration
11.05.01	Components to develop successful professional collaborative relationships.
11.05.02	Application of professional collaboration.
11.06.	Case Management
11.06.01	Components of successful case management.
11.06.02	Methods to evaluate success and areas for improvement within one's own case management.
11.07.	Professionalism
11.07.01	Components of working professionally with others using clinical sensitivity.
11.07.02	Application of working professionally with others using clinical sensitivity.
11.07.03	Breadth and depth of scope of practice.
11.07.04	Areas of need or continued growth of staff and intervention team.
11.07.05	Areas of need or continued growth of self.
11.07.06	Alternative perspectives about behaviorism and behavior analysis.