

BCSP | Board of Certified Safety Professionals
— Since 1969 —

Professional Certification:
The Winning Game Plan for Safety and Health Practitioners

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2019 Indiana Safety and Health Conference & Expo

CELEBRATING 50 YEARS
BCSP
SINCE 1969

A graphic featuring a referee in a black and white striped shirt and a black cap with 'BCSP' on it, standing on a football field at night with stadium lights. The referee has his hands clasped above his head. A large gold seal with 'CELEBRATING 50 YEARS', 'BCSP', and 'SINCE 1969' is overlaid on the referee's chest.

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Overview of the Presentation

- **WHAT**
...is Professional Certification?
...is Accreditation?
- **HOW**
...are Safety and Health certification programs developed, administered, maintained, and protected?
- **WHY**
...should Safety and Health practitioners pursue certification?

A realistic brown football with white laces and stripes, positioned on the right side of the slide.

CELEBRATING 50 YEARS
BCSP
SINCE 1969

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A vertical gold bar on the left side of the slide contains a diamond-shaped logo with the number '3' inside. At the bottom left, there is a smaller version of the BCSP 50th anniversary seal.

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What is Professional Certification?

- One of various types of “credentials”
- Voluntary
- Administered by non-government entity
- Shows that you meet minimum criteria, e.g.
 - Education
 - Years of experience
 - Pass an exam
- Time-limited (must be renewed)





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	Certification	License	Certificate	Degree
Granted By	Non-Govt. Entity	Govt. Agency	Training Provider	Ed. Institute
Mandatory?	No	Yes	No	No
Enforced By	Disciplinary Policies of Granting Organization	Law	Varies	Employment Policies
Duration	Limited (Renew by Demonstrating Maintained Proficiency)	Limited (Renew by Demonstrating Maintained Proficiency)	Permanent	Permanent
Scope	Specialized Field of Practice	Specialized Field of Practice	Material Covered by Training	Broad Area of Study (Major)
Eligibility to Obtain	Education, Years of Experience	Education, Years of Experience	Often Self-Determined (Interest)	Admissions Process (Varies)
Demonstrate Proficiency (Initially) By	Passing a Rigorous Examination	Passing a Rigorous Examination	Passing an Assessment	Passing Rigorous Series of Courses in a Curriculum
Demonstrate Maintained Proficiency By	Ongoing Practice, Cont. Education; Retaking Exam (Optional)	Continuing Professional Development; Retaking Exam (Optional)	N/A	N/A

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What is Accreditation?

- A credential for the certification organization
- Demonstrates that the certification program complies with established performance standards (e.g., ISO/IEC 17024)
- Periodic assessment by third party (e.g., ANSI)
 - Must address and correct findings
- Assures prospective certificants that they are pursuing a quality certification



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How are S&H Certification Programs Developed, Administered, Maintained, and Protected?

- Developing and Running a Certification Program
 - *Operated as a Business*
- Revenues > Expenses
- Purpose and Goals of the Program
- Market Research
- Common Functional Areas
 - Governance
 - Payroll and Finance
 - HR
 - Marketing and Communications
 - Customer Service
 - IT
 - Legal



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How are S&H Certification Programs Developed, Administered, Maintained, and Protected?

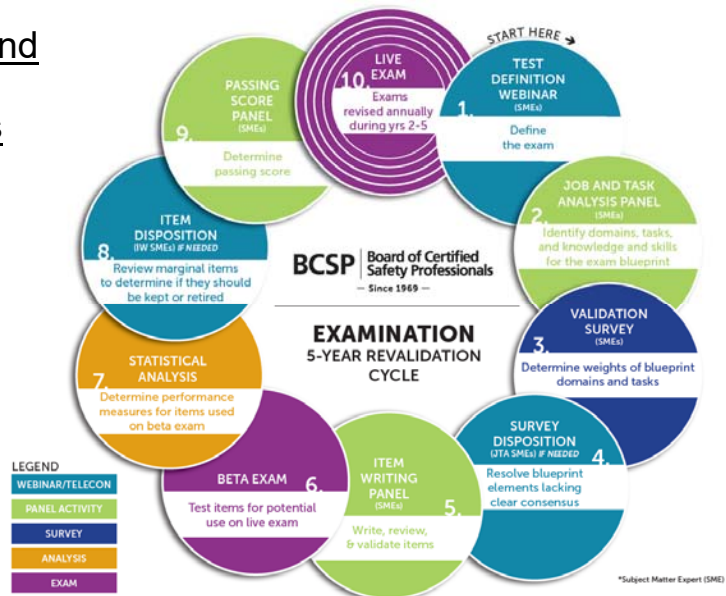
- Developing, Administering, and Maintaining Examinations
- “Logically Sound” and “Legally Defensible”
- Multiple Choice Exams: the Standard for S&H Certification for >40 Years
- Psychometric (“Mental Measurement”) Process
 - Systematic Method
 - Objectively Measure Knowledge and Skills
- Most exams today are administered on computers, under strict security controls, at professional testing centers



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- Developing and Maintaining Examinations (Cont.)



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Job and Task Analysis (JTA)/Role Delineation

- Generally the Starting Point of the Revalidation Cycle
- Purpose:
 - Identify Tasks That are Part of the Job
 - Identify Knowledge and Skills Needed
- Performed by a Panel of Subject Matter Experts (SMEs)
 - Diversity of Geography, Background, Years of Experience
- Validated by Conducting a Survey of a Large Number of SMEs
 - Rate the Importance, Frequency, and Criticality of Each Task, Knowledge, and Skill
 - Estimate the Weighting (%) of Each Area of Knowledge and Skills
- Result is the Examination Blueprint – an Outline of the Domains and Competencies to be Tested

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Exam Item Development

- Exam “Items” (Questions and the Answer Options) Must Be Fair and Represent Current and Relevant Industry Practice
- Written and Reviewed by Another Panel of SMEs
- Standards for Well-Written Items (not an exhaustive list)
 - All Items Fairly Close in Difficulty Level
 - No Trick Questions
 - Answer Options of Similar Length and Grammatically Parallel
 - Plausible Distractors
 - No Use of “All of the Above,” “None of the Above,” or Multiple Options (e.g., “A and B”) Being the Correct Answer
- Exams Consist of Scored and Unscored Items
 - Scored Items are selected (using item-level statistics) from either “Beta Exam” items, or from items previously appearing as unscored items



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Cut Score Determination

- Angoff and Modified Angoff Methods
 - Performed By Panel of SMEs
 - Review Each Item, ID Correct Answer, Review Distractors, Estimate % of MQCs That Would Answer Correctly
 - Multiple Iterations, After Comparing All SMEs’ Ratings (Ratings Should Converge)
 - Average Each SME’s Ratings For All Items, Then Grand Average of All SMEs’ Averages
- Bookmark Method
 - Rank All Items From Easiest to Most Difficult
 - Each SME Places Bookmark Where They Think Most MQCs Would Begin to Consistently Answer Incorrectly
 - Average All SMEs’ Bookmark Placements
- Obtain Approval of Passing Score from Authorized Board/Committee



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Statistical Analysis and Continuous Improvement

- Performance statistics of items are gathered and analyzed
 - **Difficulty** (% of test-takers that answered the item correctly)
 - **Point-Biserial Correlation** (comparison between whether test-takers got the item right or wrong, and whether they did well or poorly on the whole Exam)
 - **Item Reliability** (How Much Each Item Contributes to Reliability Measure of the Whole Exam)
- Analysis of statistics of all items on Beta Exam – basis for selection of scored items for live exam
- Analysis of statistics of scored items on live exams – basis for selecting items to be replaced in annual revisions
- Analysis of statistics of unscored items – basis for using unscored items to replace poorly performing scored items
- Each exam revised annually and completely revalidated (new JTA, blueprint, Beta Exam, passing score) at set intervals (e.g., 5 years) to avoid overexposure of items and ensure exam reflects current practice



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Protecting Certification Marks Against Unauthorized Use

- Identifying
 - Directory of Certificants – Anyone Can Check and Report
- Penalizing
 - Judicial Commission
 - Disciplinary Policies
 - Publish List of Offenders
 - Prohibit Sitting for the Exam for x Years



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Why Should Safety & Health Practitioners Pursue Certification?

- Value to the Certificant
 - Personal Satisfaction
 - Professional Credibility
 - Enhances Employability/Mobility
 - Increases Earning Potential
- Value to the Employer
 - Ease of Hiring
 - Higher (and Sooner) Productivity
 - Corporate Resume / Marketability of Company



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Questions?

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Thank You and Stay Safe!

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