Culturo-Behavior Science (CBS) Concentration Application

CBS applications are submitted via your ABAI portal. This reference document contains all the information you must provide to apply for a CBS Concentration. Once you submit your completed CBS Concentration application, you will be required to pay the corresponding fee. The application will be reviewed within 30 days. Applicants will be contacted if additional information is required.

Fee Schedule

	US Graduate	US Undergraduate	Non-US Graduate or Undergraduate	ABAI Accredited Programs
Application Fee	$500	$250	$125	$0
Annual Sustaining Fee	$250	$125	$65	$0

The CBS concentration contains three main content areas with course objectives, course items, competencies, and readings. A program may adopt the CBS requirements in entirety or submit alternative contents, such as readings or competencies, for consideration during the application process. The program must demonstrate the alternative contents meet the content area and item requirements. The course credits may be arranged differently per institution. Typically, institutions in the United States full 45 hours in a 3-credit course. Non-U.S. institutions must fulfill this requirement equally, according to discipline, credit hours, ECTS, or other systems, and according to national requirements/standards.

Institution

Name of CBS Concentration:
Institution Name:
Department Type: Behavior Analysis, Education, Psychology, Special Education, Other

- If other, specify:

Department Name:
Program Name:
Program Website:
Street Address:
City:
State/Province:
Zip/Postal Code:
Country:
Coursework Level: undergraduate/graduate
Mode of Instruction: online, on-campus, hybrid, both on-campus and online
Sequence Structure: stand-alone course sequence/embedded within a degree program, both
Credit System: semester, quarter, other

- If other, specify:

Coordinator

See CBS Coordinator Qualifications here.
First Name, Last Name, Email

Course Instructor List

See CBS Instructor Qualifications here. *For each instructor, provide the following details. All instructors must complete an affidavit.*

First Name, Last Name, Email

Course List

For each course in the CBS concentration, provide the following details. You will also be required to upload the syllabus for each course.

Course number:
Course name:
Alternate course number(s):
Alternate course name(s):
Credit hours:
Credit level:
Mode of instruction:
Class start date:
Class end date:
Term:
Year:

For each course, enter the number of hours covered in each content area. Select the competencies assessed within each course objective item. Then, select the course readings or submit other readings not listed in the application.

Basic Principles in Behavior Analysis

As a prerequisite, students will demonstrate satisfactory completion of a class in Basic Principles in Behavior Analysis to provide students with common language and basic knowledge.

Content Hours:

- 45 hours required

Course objectives:

- Identify the main concepts of behavior analysis
- Analyze behavior using such concepts
- Discuss the implications of these concepts to experimental and applied research

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
1. Selection by consequences (phylogeny, ontogeny, and culture)	• Identify each level of selection. • Describe the relation between each level. • Identify the subject of matter of behavior analysis in each level. • Relate levels of selection to the analysis of psychological phenomena	Skinner, B. F. (1981). Selection by consequences. Science, 213, 501-504. Killeen, P. R. (2001). The Four Causes of Behavior. *Current Directions in Psychological Science*, 10(4), 136–140	Moore, J. (2011). Behaviorism. The Psychological Record, 61, 449-464. Morris, E.K., Todd, J.T., Midgley, B.D., Schneider, S.M., & Johnson, L.M. (1990). The history of behavior analysis: Some historiography and a bibliography. Behavior Analyst, 13, 131-158. Neuringer, A. (1991). Humble behaviorism. The Behavior Analyst, 14(1), 1–13. Baum, W. M. (2011). Behaviorism, private events, and the molar view of behavior. The Behavior Analyst, 34(2), 185-200. Kileen, P. R. (2019, ahead of print). The non-darwinian evolution of behavers and behaviors. Behavioral Processes. Retrieved from: https://www.academia.edu/38626715/The_non-Darwinian_evolution_of_behaver

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
			s_and_behaviors?auto=download
2. Reflexes and Respondent Behavior	• Recognize the main characteristics of respondent learning; • Define the main topics related to respondent behavior (eliciting stimulus, unconditioned response, habituation, etc.) • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Catania, A. C. (2013). Learning (5th Edition). Cornwall-on-Hudson, NY: Sloan Publishing. (Chapter 4, emitted and elicited behavior) Mazur, J. E. (2006). Learning and Behavior (6th Edition). New Jersey: Prentice Hall. (Chapters 2, 3 and 4)	Pear, J. J., & Eldridge, G. D. (1984). The operant-respondent distinction: future directions. Journal of the Experimental Analysis of Behavior, 42(3), 453-467. Domjan, M. (2016). Elicited versus emitted behavior: Time to abandon the distinction. Journal of the Experimental Analysis of Behavior, 105(2), 231-245. Lattal, K. M. (2012). Pavlovian conditioning. APA handbook of behavior analysis, 1, 283-306. Rescorla, R. A. (1988). Pavlovian Conditioning: It's Not What You Think It Is. American

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
			Psychologist, 43(3), 151–160. https://doi.org/10.1037/0003-066X.43.3.151
3. Consequences of Behavior: Reinforcement (positive and negative)	• Recognize the main characteristics of operant learning; • Define the main topics related to operant behavior and its control by reinforcement (Positive Reinforcer, Negative reinforcer, extinction, etc.) • Differentiate between operant and respondent behavior; • Discuss critically the benefits and problems of control by reinforcement contingencies; • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Mazur, J. E. (2006). *Learning and Behavior* (6th Edition). New Jersey: Prentice Hall. (Chapters 5, 7 and 8) Hineline, P.N. & Rosales-Ruiz, J. (2013). Behavior in relation to aversive events: Punishment and negative reinforcement. In G.J. Madden (Ed.), APA Handbook of Behavior Analysis: Vol. 1 Methods and Principles (pp. 33-64). Washington, DC: American Psychological Association.	Iwata, B. A. (2006). On the distinction between positive and negative reinforcement. The Behavior Analyst, 29(1), 121-123. Killeen, P. R., & Jacobs, K. W. (2017). Coal is not black, snow is not white, food is not a reinforcer: the roles of affordances and dispositions in the analysis of behavior. The Behavior Analyst, 40(1), 17-38. Shahan T. A. (2010). Conditioned reinforcement and response strength. Journal of the experimental analysis of behavior, 93(2), 269-89. Shahan, T. A. (2017). Moving beyond reinforcement and response strength. The Behavior Analyst, 40, 107-121.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
			Baron, A. & Galizio, M. (2005). Positive and negative reinforcement: Should the distinction be preserved? The Behavior Analyst, 28, 85 – 98. Glenn, S. S., Ellis, J., & Greenspoon, J. (1992). On the revolutionary nature of the operant as a unit of behavioral selection. American Psychologist, 47(11), 1329–1336. https://doi.org/10.1037/0003-066X.47.11.1329
4. Consequences of Behavior: Punishment (positive and negative)	• Define the main topics related to operant behavior and its control by punishment (Positive Punishment, Negative Punishment, etc.) • Differentiate between control by reinforcement and punishment, especially relating it to negative reinforcement; • Discuss critically the benefits and problems of control by punishment contingencies;	Catania, A. C. (2013). *Learning (5th Edition).* Cornwall-on-Hudson, NY: Sloan Publishing. (Chapter 5, 6, 7, 8)	Critchfield, T. S. (2014). Skeptic's corner: Punishment—destructive force or valuable social "adhesive"?. Behavior Analysis in Practice, 7, 36-44. Lerman, D. C. & Vorndran, (2002). On the status of knowledge for using punishment: Implications for treating behavior disorders. Journal of Applied Behavior Analysis, 35 (4), 431–464.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;		Rasmussen, E. B. & Newland, M. C. (2008). Asymmetry of reinforcement and punishment in human choice. Journal of the Experimental Analysis of Behavior, 89 (2), 157–167.
5. Schedules of Reinforcement and Choice	• Identify different schedules of reinforcement; • Describe complex schedules of reinforcement; • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Mazur, J. E. (2006). *Learning and Behavior* (6th Edition). New Jersey: Prentice Hall. (Chapters 6, and 9) McDowell, J. J. (1988). Matching theory in natural human environments. The Behavior Analyst, 11(2), 95–109. Retrieved from	Reed, D. D., & Kaplan, B. A. (2011). The matching law: A tutorial for practitioners. Behavior Analysis in Practice, 4(2), 15-24. Roscoe, E. M., Iwata, B. A., & Kahng, S. (1999). Relative versus absolute reinforcement effects: Implications for preference assessments. Journal of Applied Behavior Analysis, 32, 479-493. Borrero, J. C., Crisolo, S. S., Tu, Q., Rieland, W. A., Ross, N. A., Francisco, M. T., & Yamamoto, K. Y. (2007). An application of the matching law to social dynamics. Journal of Applied Behavior Analysis (Lawrence, KS), 40(4), 589-601.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
			Davison, M., & Baum, W. M. (2000). Choice in a variable environment: every reinforcer counts. Journal of the Experimental Analysis of Behavior (Bloomington, IN), 74(1), 1-24.
6. Basic Principles of Stimulus Control: Discrimination and Generalization	• Define Stimulus Control and its relation to operant behavior; • Identify discrimination processes in operant behavior; • Identify generalization processes in operant behavior; • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Terrace, H. S. (1966). Stimulus Control. Em W. K. Honig (Org.). Operant Behavior: Areas of Research and Application. New York: Appleton-Century-Kroft. Catania, A. C. (2013). Learning (5th Edition). Cornwall-on-Hudson, NY: Sloan Publishing. (Chapter 7, 11, 12) Edelstien, B.A. (1989). Generalization: Terminological, methodological, and	Sidman, M. (2008). Reflections on stimulus control. The Behavior Analyst, 31, 127-135. Dube, W. V., MacDonald, R. F., Mansfield, R. C., Holcomb, W. L., & Ahearn, W. H. (2004). Toward a Behavioral Analysis of Joint Attention. The Behavior Analyst, 27, 197-207.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
		conceptual issues. Behavior Therapy, 20, 311-324.	
7. Equivalence Stimuli Classes and Relational Learning	• Identify different cases of stimulus control: Equivalence Stimuli and Relational Learning; • Describe differences between the different operations or processes in Stimulus Control; • Describe experimental work related to these concepts; • Discuss the main theoretical debate involving: naming hypothesis, relational frame theory and equivalent relations based on direct act contingency; • Describe the importance of these concepts to applied settings;	Cumming, W. W. e Berryman, R. (1965). The complex discriminated operant: Studies of matching-to-sample and related problems. Em D. I. Mostofsky (Org.). Stimulus Generalization. Stanford: Stanford University Press. Sidman, M. (2009). Equivalence relations and Behavior: A Tutorial. In The Analysis of Verbal Behavior, 25, 5-17. Barnes-Holmes, D., Finn, M., McEnteggart, C., & Barnes-Holmes, Y. (2017, November 9). Derived stimulus relations and their role in a behavior-analytic account of human language and cognition. The Behavior Analyst.	Törneke, N. (2010). Derived relational responding as the fundamental element in human language. In Learning RFT: An introduction to relational frame theory and its clinical application (pp. 59 – 890. Oakland, CA: Context Press. Gross, A. C., & Fox, E. J. (2009). Relational frame theory: An overview of the controversy. The Analysis of Verbal Behavior, 25, 87–98. https://doi.org/10.1007/BF03393073 McIlvane WJ, Dube WV. Naming as a facilitator of discrimination. J Exp Anal Behav. 1996 Jan;65(1):267–272 Sidman M., Tailby, W. (1982). Conditional discrimination vs. matching to sample: an

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
		doi:10.1007/s40614-017-0124-7 Horne, P.J., Lowe C.F. (1996). On the origins of naming and other symbolic behavior. Journal of the Experimental Analysis of Behavior, 65(1),185–241	expansion of the testing paradigm. Journal of the Experimental Analysis of Behavior, 37(1), 5–22. Miguel, C. F. (2018, July 5). Problem-Solving, Bidirectional Naming, and the Development of Verbal Repertoires. Behavior Analysis: Research and Practice. Advance online publication. http://dx.doi.org/10.1037/bar0000110.
8. Motivating operations (EOs, AOs)	• Differentiate stimulus control from motivating function; • Define and identify different types of abolish and establishing operations; • Identify effects of motivation operations over reinforcement and discriminative stimuli; • Identify motivational operations related to conditioned or unconditional reinforcement; • Describe experimental work related to these concepts;	Michael J. (1982). Distinguishing between discriminative and motivating functions of stimuli. Journal of the Experimental Analysis of Behavior, 37, 149–155. Miguel, C. F. (2013). Jack Michael's Motivation. The Analysis of Verbal Behavior, 29, 3-11.	Poling, A., Lotfizadeh, A., & Edwards, T. L. (2017). Predicting reinforcement: Utility of the motivating operations concept. The Behavior Analyst, 40, 49-56.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Describe the importance of these concepts to applied settings;		
9. Social Behavior	• Differentiate social behavior from non-social behavior; • Define social stimuli and social reinforcement; • Identify social behavior as an interlocking behavior contingency; • Identify procedures to study social behavior; • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Skinner, B. F. (1953). Science and Human Behavior (Cap 19, 20, 21). Cambridge, MA: B. F. Skinner Foundation. Schmitt, D. R. (1998). Social behavior. In K. Lattal & M. Perone (Eds.), *Handbook of research method in human operant behavior. (pp. 471-505). New York: Plenum Press.*	Guerin, B. (2001). Individuals as social relationships: 18 ways that acting alone can be thought of as social behavior. Review of General Psychology, 5(4), 406–428. https://doi.org/10.1037/1089-2680.5.4.406
10. Verbal Behavior	• Differentiate verbal behavior from non-verbal behavior; • Categorize verbal behavior based on functional categories and identify different contingencies in verbal operants (tact, mand, autoclitics, etc.); • Identify procedures to study verbal behavior	Vargas, E. A. (2007). B. F. Skinner's Verbal Behavior: An Introduction. Brazilian Journal of Behavioral and Cognitive Therapy, 9, 1-20. Skinner, B. F. (1957). Verbal behavior. Acton: Copley Publishing Group. (selected chapters)	Plavnick, J. B., & Normand, M. P. (2013). Functional analysis of verbal behavior: A brief review. Journal of Applied Behavior Analysis, 46, 349–353. Sautter, R. A., & LeBlanc, L.A. (2006). Empirical applications of Skinner's analysis of verbal behavior with humans. The Analysis of Verbal Behavior, 22, 35–48.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Debate verbal behavior as social behavior; • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;		Fryling, M. (2017). The functional independence of Skinner's verbal operants: Conceptual and applied implications. Behavioral Interventions 32, 70-78. Grow, L.L, & Kodak, T. (2010). Recent research on emergent verbal behavior: Clinical applications and future directions. Journal of Applied Behavior Analysis, 43(4), 775-778. https://onlinelibrary.wiley.com/doi/10.1901/jaba.2010.43-775
11. Rule Governed Behavior	• Identify rule-governed behavior in the context of operant analysis; • Differentiate rule-governed behavior and behavior shaped directly by contact with non-verbal contingency; • Identify procedures to study rule-governed behavior • Be able to identify divergences in the analysis of rule-governed behavior and how they are related	Catania, A. C. (2013). Learning (5th Edition). Cornwall-on-Hudson, NY: Sloan Publishing. (Chapter 23) Glenn, S. S. (1987). Rules as environmental events. The Analysis of Verbal Behavior, 5, 29-32. Skinner, B. F. (1969). Contingencies of reinforcement: A Theoretical	Palaez, M., Moreno, R. (1999). Four dimensions of rules and their correspondence to rule-governed behavior: A taxonomy. Behavioral Development 6(1), 21-27 Rosenfarb, I. S., Newland, M. C., Brannon, S. E., & Howey, D. S. (1992). Effects of self-generated rules on the development of schedule-

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	to simple or conditional stimulus control and motivational operations. • Describe experimental work related to these concepts; • Describe the importance of these concepts to applied settings;	Analysis (An Operant Analysis of Problem Solving). Cambridge, MA: B. F. Skinner Foundation. Wulfert, E. (2018). Rule-governed behavior. Salem Press Encyclopedia of Health. Retrieved from http://search.ebscohost.com.libauth.purdueglobal.edu/login.aspx?direct=true&db=ers&AN=93872212&site=eds-live	controlled behavior. Journal of the Experimental Analysis of Behavior (Bloomington, IN), 58, 107-121. Schlinger, H., & Blakely, E. (1987). Function-altering effects of contingency-specifying stimuli. The Behavior Analyst, 10(1), 41-45. Zettle, R. D., & Young, M. J. (1987). Rule-following and human operant responding: Conceptual and methodological considerations. The Analysis of Verbal Behavior, 5(1), 33-39. Hayes, S. C. (1993). Rule governance: basic behavioral research and applied implications. Current Directions in Psychological Science, 2, 193-197. doi: 10.1111/1467-8721.ep10769746

Note: This guide uses Catania (2013) and Mazur's (2006) textbooks. Faculty may choose a different textbook that also explores the basic concepts.

OTHER READINGS:

Chance, P. (Ed.) Learning and behavior. Belmont, CA: Nelson Education.

Cooper, J. O., Heron, T. E. & Heward, W. L. (2019). Applied behavior analysis. (Third edition). New Jersey: Pearson Merrill Prentice Hall.

Michael, J. (2004). Concepts and Principles of Behavior Analysis, Revised Edition. Kalamazoo, MI: Society for the Advancement of Behavior Analysis.
Pierce, W. D., & Cheney, C. D. (2017). *Behavior Analysis and Learning*. (6th Edition). New York: Taylor & Francis.

Behavioral Systems Analysis

Behavioral Systems Analysis (BSA) comes from a synthesis of the fields of behavior analysis and systems analysis and can be defined as the analysis of behavior that occurs in complex and organized social environments. BSA offers much to promote behavioral solutions to socially significant practices within large social units like organizations and cultures.

Content Hours:

- 45 hours required

Course objectives:

- Explain conceptual development and technological application of behavioral systems analysis
- Describe conceptual, methodological, and technological strengths and weaknesses associated with this approach
- Integrate themes and topics in behavior analysis that may contribute to the conceptual, methodological, and technological development of BSA

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
1. Introduction to OBM, BSA, & Systems Theory	• Students will define (state the main components of) organizational behavior management. • Students will define (state the main components of) general systems theory. • Students will define (state the main components of) behavioral systems analysis. • Students will differentiate among organizational behavior management, general systems	Brethower, D. M. (2000). A systematic view of enterprise: Adding value to performance. *Journal of Organizational Behavior Management, 20* (3/4), 165-190. Caws, P (2015). General Systems Theory: Its Past and Potential. *Systems Research & Behavioral Science*, 32, 514–521. doi: 10.1002/sres.2353. Krapfl, J. E. & Gasparotto, G. (1982). Behavioral systems analysis. In L. W. Fredericksen (Ed.)	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	theory, and behavioral systems analysis.	*Handbook of Organizational Behavior Management.* New York, NY: Wiley.	
2. Selection & Cultural Change	• Students will name, define, and describe the three kinds of selection including the units of analysis and how the selection occurs over time. • Students will describe how each kind of selection is necessary but different from each of the other kinds of selection. • Students will define and differentiate between and among an individual response, a behavioral lineage, and a cultural (culturo-behavioral) lineage and provide examples of each. • Students will define (including the critical components and the relations between the components) and differentiate between and among the concepts of the metacontingency, the macrocontingency, and the cultural cusp.	Glenn, S. S. (2004). Individual behavior, culture, and social change. *The Behavior Analyst, 27*(2), 133-151. Glenn, S. S., Malott, M. E., Andery, M. A. P. A., Houmanfar, R. A., Sandaker, I., Todorov, J. C., Tourinho, E. Z., Vasconcelos, L. A. (2016). Toward consistent terminology in a behaviorist approach to cultural analysis. *Behavior and Social Issues, 25*, 11-27. Skinner, B. F. (1981). Selection by consequences. *Science, 213*, 501-504.	Malott, M. E., & Glenn, S. S. (2006). Targets of interventions in cultural and behavioral change. *Behavior and Social Issues, 15,* 31-56. Mattaini, M. A. (2013). Behavioral Systems Science and Nonviolent Struggle (Chapter 4). In *Strategic Nonviolent Power*. Edmonton, AB: Athabasca University Press.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will define and differentiate among "process", "content", and "procedure" in operant contingencies and metacontingencies. • Students will describe at least two ways in which one might produce cultural change.		
3. Complexity & Emergence	• Students will describe the types of selection processes that have been proposed (including the units that are selected and the contingency arrangements) to be involved in cultural evolution and the various perspectives with respect to these processes (e.g., Skinner; Couto & Sandaker, Glenn; Krispin). • Students will define systems, complex systems, complex adaptive systems, and self-organizing systems. • Students will describe and analyze the concepts of emergence and complexity in the context of cultural and systems evolution and large-scale change.	Krispin, J. V. (2017). Positive feedback loops of metacontingencies: A new conceptualization of cultural-level selection. *Behavior and Social Issues***,** *26*, 95-110. doi: https://doi.org/10.5210/bsi.v26i0.7397. Moroni, S. (2015). Complexity and the inherent limits of explanation and prediction: Urban codes for self-organising cities. *Planning Theory*, *14*(3), 248-267. Couto, K. C., & Sandaker, I. (2016). Natural, behavioral and cultural selection-analysis: An integrative approach. *Behavior*	Krispin, J. V. (2016). What is the metacontingency? Deconstructing claims of emergence and cultural-level selection. **Behavior and Social Issues,** *25*, 28-https://behaviorandsocialissues.org/ojs/index.php/bsi/article/view/6186

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will describe some of the challenges in designing complex systems and in predicting and producing large scale change. • Students will summarize and provide a critical analysis of some of the proposed strategies for promoting large scale change.	*and Social Issues, 25,* 54-60. https://doi.org/10.5210/bsi.v25i0.6891 Waddock, S., Meszoely, G. M., Waddell, S., & Dentoni, D. (2015). The complexity of wicked problems in large scale change. *Journal of Organizational Change Management*, *28*(6), 993-1012.	
4. Transdisciplinary Considerations on Complexity and Systems	• Students will describe the implications of theories (social-ecological systems approach, system dynamics, exploratory modeling and analysis, institutional economics analysis of social dilemmas) that consider or discount the interdependencies among constituents in complex systems. • Students will describe the approaches to modeling (predictive modeling, exploratory modeling and analysis), the strengths and limitations of each, and the types of research	Folke, C., Biggs, R., Norström, A. V., Reyers, B., & Rockström, J. (2016). Social-ecological resilience and biosphere-based sustainability science. *Ecology and Society*, *21*(3). Kwakkel, J. H., & Pruyt, E. (2015). Using system dynamics for grand challenges: the ESDMA approach. *Systems Research and Behavioral Science*, *32*(3), 358-375. Valentinov, V., & Chatalova, L. (2016). Institutional economics and social dilemmas: A systems theory perspective. *Systems*	Grossmann, K. & Haase, A. (2016) Neighborhood change beyond clear storylines: What can assemblage and complexity theories contribute to understandings of seemingly paradoxical neighborhood development? *Urban Geography, 37*, 5, 727-747. doi: 10.1080/02723638.2015.1113807 Kohl, P., Crampin, E. J., Quinn, T. A., & Noble, D. (2010). Systems biology: An approach. *Nature Publishing Group, 88*(1), 25-33. Rizzo, A., & Galanakis, M. (2015). Transdisciplinary urbanism:

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	questions that can be addressed by each. • Students will explain how different perspectives within systems theory have been used to understand global societal challenges (wicked problems) including the strengths and limitations of each (particularly with respect to systems boundaries and prediction). • Students will compare and contrast transdisciplinary perspectives on complexity and systems with behavioral systems analysis perspectives on complexity and systems, particularly related to cultural, societal, and organizational change.	*Research and Behavioral Science*, *33*(1), 138-149.	three experiences from Europe and Canada. *Cities*, *47*, 35-44.
5. Communication & Cultural Change	• Students will describe the form and function that communication typically serves in the organizational setting including examples of communication in the context or form of communication	Smith, G. S., Houmanfar, R., & Denny, M. (2012). Impact of rule accuracy on productivity and rumor in an organizational analog. *Journal of Organizational Behavior Management, 32,* 3-25.	Houmanfar, R., & Rodrigues, N. J. (2012). The role of leadership and communication in organizational change. *Journal of Applied Radical Behavior Analysis. N1*, 22–27. (also accepted for publication in *Psicologia Applicata alla*

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	networks, rules, rumor, leadership, etc. • Students will explain what Relational Frame Theory adds to analysis of cultural practices with a specific focus on derived relational responding, rules, and the associated effects on the behavior of individuals as well as "interlocked behaviors". • Students will describe the difference between sociological and psychological events (Kantor, 1982) and what the implications of this are for culture and the metacontingency more specifically. • Students will define (including the critical components and the relations between the components) and differentiate between and among the components of the expanded (five-term) metacontingency. • Students will describe the rationale, method, and findings of some of the experimental work	Houmanfar, R. A., Rodrigues, N. J., & Smith, G. S. (2009). Role of Communication Networks in Behavioral Systems Analysis. *Journal of Organizational Behavior Management, 29*, 257-275. Houmanfar, R. A., Rodrigues, N. J., & Ward, T. A., (2010). Emergence & metacontingency: Points of contact and departure. *Behavior and Social Issues, 19*, 78-103 Smith, G. S., Houmanfar, R., & Louis, S. J. (2011). The participatory role of verbal behavior in an elaborated account of metacontingency: From theory to investigation. *Behavior and Social Issues, 20*, 112 – 145.	*Medicina del Lavoro e della Riabilitazione*).

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	that has explored the role of verbal behavior in understanding the cultural practices of organizations.		
6. Leadership & Cultural Change	• Students will define leadership from a behavioral perspective. • Students will describe the key functions of leadership including the characteristics of good leaders, particularly with respect to communication; the variables that promote effective leadership; and how leadership entails shifts in metacontingencies. • Students will explain how leaders promote organizational values and how leaders can promote prosociality, balancing financial and social capital and contingencies • Students will summarize the key findings from behavior analytic efforts at understanding leadership and the behaviors and related contingencies that leaders might exhibit to produce cultural change that promotes the well-being of society.	Houmanfar, R., Alavosius, M. P., Morford, Z. H., Reimer, D., Herbst, S. A. (2015). Functions of organizational leaders in cultural change: Financial and social well-being. *Journal of Organizational Behavior Management, 35*, 4-27. Houmanfar, R. A., & Mattaini, M. A. (2016). Leadership and cultural change: Implications for Behavior Analysis. *The Behavior Analyst, 39,* 41-46. Malott, M. E. (2016a). What studying leadership can teach us about the science of behavior. *The Behavior Analyst, 39,* 47-74. Mattaini, M. A. (2013). Organization and leadership in resistance movements (Chapter 6). In *Strategic Nonviolent Power*.	Alavosius, M. P., Houmanfar, R. A., Anbro, S., Burleigh, K., & Hebein, C. (2017). Leadership and crew resource management in high-reliability organizations: A competency framework for measuring behaviors. *Journal of Organizational Behavior Management, 37*, 142-170. Krapfl J. E, & Kruja, B. (2015). Leadership and culture. *Journal of Organizational Behavior Management, 35*, 28-43.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
		Edmonton, AB: Athabasca University Press.	
7. Selection & Organizational Change	• Students will describe the role of selection (behavioral and cultural), the corresponding units of analysis, and under which conditions each is most appropriate in the context of organizations. • Students will describe the relationships between behavioral contingencies, interlocking behavioral contingencies, metacontingencies and the total performance system. • Students will define, identify the relations between the organization, the system, and the subsystem and compare and contrast them; describing how the boundaries of a system or organization are identified. • Students will describe the different types of complexity and the relationships between them and explain how complexity affects an organization.	Malott, M. E. (2003). *Paradox of organizational change.* Reno, NV: Context Press. Chapters 1, 2, & 3. Abernathy, W. B. (2009). Walden two revisited: Optimizing behavioral systems. *Journal of Organizational Behavior Management, 29,* 175 -192. Glenn, S. S., & Malott, M. M. (2004). Complexity and selection: Implications for organizational change. *Behavior & Social Issues, 13,* 89-106.	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will describe the implication of growth in management and how that relates to the interlocking behavioral contingencies at lower levels. • Students will compare and contrast behavior systems analysis/performance systems analysis and organizational behavior analysis. • Students will summarize how applied behavior analysis and organizational behavior management employ utopian thinking in their practice and describe the four recommendations made by Abernathy (2009) that could improve the implementation and sustainability of "behaviorist utopia" within the context of existing organizations.		
8. Cultural Contingencies in Organizations: Functional Assessment & Process Analysis	• Students will perform a Total Performance System analysis of an organization. • Students will identify, define, and provide the rationale for at least	Malott, M. E. (2003). *Paradox of organizational change.* Reno, NV: Context Press. Chapters 4 to 9	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	one measure for each components in their Total Performance System analysis. • Students will prepare a summary of the administrative structure and prepare a department-function analysis for an organization. • Students will prepare a detailed analysis (including a detailed process map and units of measurement) of at least one process within an organization that includes: 1) process identification, 2) scope, 3) sub processes, 4) units, 5) general tasks, 6) aggregate products, 7) participants, 8) uniqueness, and 9) duration. • Students will prepare a contingency analysis and task analysis for one performer within an organization. • Students will identify, within an organization, an existing contingency, a performance management contingency that could change that contingency, the	Mattaini, M. A. (2013). Sustaining resistance movements: Solidarity, discipline, and courage (Chapter 5). In *Strategic Nonviolent Power*. Edmonton, AB: Athabasca University Press.	

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	corresponding interlocks, and the measures that will allow them to determine if there was a shift in performance. • Students will describe, from a behavioral systems analysis perspective, the three repertoires and the contingencies associated with promotion of each that are necessary to sustain effective resistance campaigns.		
9. Cultural Contingencies in Organizations: Behavioral Systems Engineering Model	• Students will summarize the rationale, method, and stages of the Behavioral Systems Engineering Model and will describe how the model can be used to produce organizational change. • Students will describe external complexity and internal complexity and what the internal and external selection practices might be with respect to how aggregate products and interlocking behavioral contingencies are selected in organizations and industry.	Malott, M. E. (2003). *Paradox of organizational change.* Chapter 10 Malott, M. E. (2016b). Selection of business practices in the midst of evolving complexity. *Journal of Organizational behavior Management, 36,* 103-122. Malott, M. E., & Martinez, W. S. (2006). Addressing organizational complexity: A behavioral systems analysis application to higher education.	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will differentiate behavioral cusps from cultural cusps and will differentiate cultural cusps from cultural incidents. • Students will construct an analysis of an organizational/community process or a set of interrelated processes or functional units based on Malott's (2003) Behavioral Systems Engineering Model.	*International Journal of Psychology, 41*(6), 1-12.	
10. Applications to Complex Systems: Ecological Analyses Part 1	• Students will explain how behavioral systems science is ecological and selectionist, how ecological strategy differs from the traditions of behavior analysis, and how ecological strategy might place cultural systems science as a specialty in ecological science. • Students will summarize the process/method, the uses, and limitations of 1) feedback-guided analysis and 2) Dyball and Newell's (2015) "cultural adaptation template"	Baer, D. M. (1974). A note on the absence of a Santa Claus in any known ecosystem: A rejoinder to Willems. *Journal of Applied Behavior Analysis, 7*(1), 167-169. https://doi.org/10.1901/jaba.1974.7-167 Dyball, R., & Newell, B. (2015). Chapter 7: Towards a shared theoretical framework. In R. Dyball & B. Newell, *Understanding human ecology* (pp. 111-137). London & New York: Routledge.	Mattaini, M. A. (2003). Constructing nonviolent alternatives to collective violence: A scientific strategy. *Behavior and Social Issues, 12,* 148-163. Mattaini, M. A. & Atkinson, K. (2011). Constructive noncooperation: Living in truth. *Peace and Conflict Studies, 18*(1), 3-43. Willems, E. P. (1974). Behavioral technology and behavioral ecology. *Journal of Applied Behavior Analysis*, *7*(1), 151-165.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Describe the three types of cultural analytic scholarship, their contributions, and their limitations. • Students will explain why new analytic tools are necessary for those engaged in cultural systems science and describe some of the tools that might be necessary.	Mattaini, M. A. (under review). Out of the Lab: Shaping an Ecological Cultural Science. *Perspectives on Behavior Science*. Mattaini, M. A. (2015). Toward a Twenty-First Century, Science-Based "Constructive Programme". In R. Amster, L. Finley, E. Pries, & R. McCutcheon (Eds). *Peace studies between tradition and innovation* (pp. 83-101). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.	https://doi.org/10.1901/jaba.1974.7-151
11. Applications to Complex Systems: Ecological Analyses Part 2	• Students will differentiate between "collective one-time actions" and "persistent cultural practices" and describe why these constitute the behavioral systems dynamics. • Students will describe the general process one may use "to influence the values or actions of a larger population" (Mattaini, 2013, p. 259), the goals of this process, the phenomena for which this process is appropriate, and how the	Aspholm, R. R., & Mattaini, M. A. (2017). Youth Activism as Violence Prevention. InPeter Sturmey (Ed.), *The Wiley handbook of violence and aggression* (page numbers unknown). Hoboken, NJ: John Wiley and Sons, Ltd. Mattaini, M. A. (2013). Constructive noncooperation (Chapter 7) & Toward "undreamt of"	Bates, M. (1950). *The nature of natural history*. Princeton, NJ: Princeton University Press. Chapter 18

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	process can be adapted when the analysis shifts to that of behavioral systems. • Students will describe the conditions under which shifts in metacontingencies are insufficient to create large scale change and will describe the types of analyses that might be useful under those conditions. • Students will summarize how behavioral systems analysis and constructional methods can contribute to meaningful change as related to youth violence. • Students will generate a diagram that depicts the likely interdependencies between several sectors within a community or organization that influence collective outcomes. • Students will generate a matrix, illustrating prosed practices within multiple sectors that could help construct and sustain a desirable cultural practice among a target	discoveries (Chapter 11). In *Strategic nonviolent power: The science of Satyagraha.* Edmonton, AB: Athabasca University Press.	

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	group and provide an ecological rationale for their analysis.		
12. Creating Solutions to Social Problems: Sustainability & Climate Change	• Students will describe the processes embedded in and the advantages to applying language-based psychological intervention methods to sustainability issues. • Students will describe the role of organizations in affecting behaviors contributing to climate change and describe systems-level interventions that could be employed and researched. • Students will explain the rationale, general strategy, and the supporting science for culture-based solutions that might lead to a more promising future with respect to climate change. • Students will describe how climate change is a "super wicked problem" and note how policy change initiatives could be made more effective if a path-dependent, applied forward reasoning approach were employed.	Newsome, W. D. & Alavosius, M. P. (2011). Toward the prediction and influence of green behavior: Seeking practical utility in research. *Behavior and Social Issues, 20,* 44-77. Alavosius, M.P., Newsome, W.D., Houmanfar, R. & Biglan, A. (2016). A Functional Contextualist Analysis of the Behavior and Organizational Practices Relevant to Climate Change. In R. Zettle, S. C. Hayes, D. Barnes-Holmes, A. Biglan (Eds). *Handbook of Contextual Behavior Science.* Hoboken, NJ: Wiley-Blackwell. Grant, L. K. (2011). Can we consume our way out of climate change? A call for analysis. *The Behavior Analyst, 34*(2), 245-266. Levin, K., Cashore, B., Bernstein, S., & Ault, G. (2012) Overcoming the	Luke, M. & Alavosius, M. P. (2012). Impacting community sustainability through behavior change. *Behavior and Social Issues, 21,* 54-79. Wilson, D. S., Ostrom, E., Cox, M. E. (2013). Generalizing the core design principles for the efficacy of groups. *Journal of Economic Behavior & Organization, 905,* 521-532.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will identify how culture-based solutions to climate change intersect with path-dependent and applied forward reasoning approaches to policy intervention as related to climate change.	tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy Science, 45*, 123-153.	
13. Creating Solutions to Social Problems: Common Pool Resources	• Students will describe Hardin's (1968) Tragedy of the Commons. • Students will describe Ostrom's work related to remediating the Tragedy of the Commons. • Students will draw parallels between Ostrom's work and a culturo-behavioral systems science perspective. • Students will describe current (and potential) efforts from behavioral scientists at employing a culturo-behavioral systems science perspective to research variables derived from Ostrom's work at governing the use of common-pool resources.	Camargo, J. & Haydu, V. B. (2016). Fostering the sustainable use of common-pool resources through behavioral interventions: An experimental approach. *Behavior and Social Issues, 25*, 61-76. Ostrom, E. (1998). Coping with tragedies of the commons. Paper prepared for delivery at the 1998 Annual Meeting of the Association for Politics and the Life Sciences (APLS).	n/a
14. Creating Solutions to Social Problems: Experimental Microcultures	• Students will explain game theory, Nash equilibrium, and the way experimental games are used to measure preference, particularly	Tourinho, E. Z. (2013). Cultural consequences and interlocking behavioral contingencies: Selection at the	Todorov, J. C. (2010). Schedules of cultural selection: Comments on "Emergence and

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	social preference, and the advantages and limitations of doing so especially as compared with field experiments. • Students will describe the Prisoner's' Dilemma game and at least two additional experimental games including the following information: 1) the definition of the game, 2) the predictions game theorists make regarding the game, 3) the procedural variations, and 4) the way the findings are interpreted. • Students will describe the primary preparations, experimentally arranged contingencies, and other important methodological distinctions in research on cultural selection processes. • Students will describe the major conclusions that can be drawn from the extant literature-based on cultural selection processes and the limitations of this research. • Students will comment on the need to differentiate between the	cultural level. *Behavior and Philosophy, 41* 60-60. Camerer, C. F., & Fehr, E. (2004). Measuring Social Norms and Preferences Using Experimental Games: A Guide for Social Scientists. In J. Henrich, R. Boyd, S. Bowles, C. Camerer, E. Fehr, & H. Gintis (Eds). *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. New York, NY: Oxford. Soares, P. F. R., Martins, J. C. T., Guimaraes, T. M. M., Leite, F. L., & Tourinho, E. Z. (2019). Effects of continuous and intermittent cultural consequences on culturants in metacontingency concurrent with operant contingency. *Behavior and Social Issues.*	Metacontingency". *Behavior and Social Issues, 19,* 86-89.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	effects of individual operant level contingencies and cultural consequences contingent upon the culturant, as well as on the work that has attempted to draw parallels between operant level selection and cultural selection.		
15. Creating Solutions to Social Problems: Community Health & Social Justice	• Students will explain how the criteria for applied behavior analysis align with applying behavior analysis to community-level research. • Students will describe the five values indicative of developing collaborative relationships between behavioral researchers and participants. • Students will describe the four values and principles that underlie community needs and resource assessments • Students will describe the five values that should guide community-based interventions and dissemination efforts for behavioral research conducted in community settings.	Fawcett, S. B. (1991). Some values guiding community research and action. *Journal of Applied Behavior Analysis, 24*(4), 621-636. https://doi.org/10.1901/jaba.1991.24-621 Moore, J. (2003). Behavior analysis, mentalism, and the path to social justice. *The Behavior Analyst, 26*(2), 181-193. Watson-Thompson, J., Collie-Akers, V., Woods, N. K., Anderson-Carpenter, K. D., Jones, M. D., & Taylor, E. L. (2014). Participatory Approaches for Conducting Community Needs and Resources Assessments. In V. C. Scott & Wolfe, S. M. *Community Psychology:*	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will describe how mentalism and attribution theory more specifically might impede social justice efforts and will explain why behavior analysis offers a constructive alternative to mentalism as it relates to social justice, prejudice, racism, and discrimination more generally. • Students will provide an example of a community needs and resources assessment and develop a community-based intervention focused on social justice, including a description of how the information gathered from the assessment informs the intervention.	*Foundations for Practice.* Thousand Oaks, CA: Sage Publications, Inc.	
16. Creating Solutions to Social Problems: Activism, Advocacy, & Accompaniment	• Students will describe and provide examples of the role nonprofits and advocacy organizations can serve in reducing negative externalities • Students will describe and provide examples of the contingencies that shape the practices of advocacy groups.	Biglan, A. (2009). The role of advocacy organizations in reducing negative externalities. *Journal of Organizational Behavior Management, 29,* 215-230. Brogran, K. M., Richling, S. M., Rapp, J. T., Thompson, K. R., & Burkhart, B. R. (2018). Collaborative efforts by the	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will explain the set of policies described by Biglan (2009) that can sharpen the contingencies that influence advocacy organizations such that they can act effectively in the interest of public wellbeing. • Students will examine several case studies detailing activism and advocacy efforts led or described by behavior analysts and will summarize the critical features of each. • Students will describe the contingencies they would arrange to lead an activism and/or advocacy effort for a cause of their choosing.	Auburn University Applied Behavior Analysis Program in the treatment of adolescents adjudicated for illegal sexual behavior. *Behavior and Social Issues, 27*, AA16-AA20. Luna, O., Rapp, J. T., Newland, M. C., Arena, R., LaPointe, L. L., Kierce, E., & Lusche, P. (2018). Alabama Psychiatric Medication Review Team (APMRT): Advocating for foster children. *Behavior and Social Issues, 27*, AA11-AA15. Nevin, J. A. (2018). Variation, selection, and social action. *Behavior and Social Issues, 27*, AA1-AA3. Schlinger, H. (2018). The Venus Project and behavioral science. *Behavior and Social Issues, 27*, AA4-AA5. Tsipursky, G., & Morford, Z. (2018). Addressing behaviors that lead to sharing fake news.	

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
		Behavior and Social Issues, 27, AA6-AA10.	
17. Developing Solutions for Organizational Problems: Total Performance System	• Students will define and distinguish between rule governed behavior and contingency shaped behavior in organizations, outlining Abernathy's (2003) free operant approach. • Students will list the components and sub-components of Abernathy's (2003) Total Performance System (TPS), list and describe the main principles of effective behavior change measures, and list the main consequential variables identifying which one is essential during the beginning stages of TPS implementation. • Students will compare and contrast different types of leadership and managerial styles in organizations with respect to how they affect performance. • Students will compare and contrast Abernathy's (2003) and	Abernathy, W. B (1996). *Sin of wages*. Atlanta, GA: Performance Management Publications. Abernathy W. B. (2001). An analysis of twelve organizations' total performance system. In L. J. Hayes, J. Austin, R. Houmanfar, & Clayton, M. C. (Eds.), *Organizational Change* (pp. 239-272). Reno, NV: Context Press. Abernathy, W. B. (2003). Creating a high performance organization through a "free operant workplace." Performance Systems Analysis. Retrieved November 5, 2003 from Cambridge Center for Behavioral Studies (http://store.behavior.org/resources/396.pdf).	n/a

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	Malott's (2003) behavioral systemic approaches.		
18. Developing Solutions for Organizational Problems: Human Performance Technology & Organizational Culture	• Students will describe the key features of the Performance Chain model and the Six Boxes model of behavior influence. • Students will differentiate behavior from accomplishments and describe why "work outputs" is the term preferred to "accomplishments". • Students will explain how cultural values influence performance expectations. • Students will describe how to use the Behavioral Systems Analysis Questionnaire to guide performance within an organization. • Students will explain how the Critical Practices Cultural Audit can be used to align an organization's culture and performance with customer value and will describe the steps one needs to take to perform and implement such an analysis.	Binder, C. (2016). Integrating organizational-cultural values with performance management. *Journal of Organizational Behavior Management, 36*(2-3), 185-201. Diener, L. H., McGee, H., M., & Miguel, C. F. (2009). An integrated approach for conducting a behavioral systems analysis. *Journal of Organizational Behavior Management, 29,* 108-135 Tosti, D., & Herbst, S. A. (2009). Organizational performance and customer value. *Journal of Organizational Behavior Management, 29*, 294 – 314. Rummler, G. (1999). Transforming organizations through human performance technology. In H. D. Stolovitch & E. J. Keeps (Eds.), *Handbook of human*	Binder, C. (2017). What it really means to be accomplishment based. *Performance Improvement, 56*(4), 20-25. Binder, C. (1998). The Six Boxes™: A descendent of Gilbert's Behavior Engineering Model. *Performance Improvement 37*(6), 48-52. Binder, C. (1995). Promoting HPT innovation: A return to our natural science roots. *Performance Improvement Quarterly, 8*(2), 95–113. Wilmoth, F. S., Prigmore, C., & Bray, M. (2002). HPT models: An overview of the major models in the field. *Performance Improvement, 41*(8), 16-25.

Items	Competencies	Core/Foundational Readings	Suggested/Ancillary Readings
	• Students will list and describe the steps in the Human Performance Technology approach to behavioral systems analysis.	*performance technology,* (pp. 47-66). San Francisco, CA: Jossey-Bass Pfeiffer.	

Note: These are additional recommended books and papers that are not unit specific but may be helpful for persons teaching courses in behavioral systems analysis.

RECOMMENDED READINGS: BOOKS

Abernathy, W. B (1996). *The sin of wages: Where the conventional pay system has led us and how to find a way out.* Memphis, TN: PerfSys Press.

Bar Bar-Yam, Y. (1997). *Dynamics of complex systems.* Reading, MA: Addison-Wesley.

Gilbert, T. F. (1978). *Human competence: Engineering worthy performance.* New York, NY: McGraw- Hill.

Hackenberg, T., Hanley, G. P., & Lattal, K. A. (Eds.) (2013). *APA handbook of behavior analysis, Vol. 2. Translating principles into practice.* Washington, DC, US: American Psychological Association.

Houmanfar, R. A., Fryling, M. & Alavosius, M. P. (Eds.) (in press). Applied behavior science in organizations: Consilience of historical and emerging trends in organizational behavior management. New York, NY: Springer.

Mitchell, M. (2009). *Complexity: A guided tour.* New York: Oxford University Press.

Moran, D. J. (2013). *Building safety commitment.* Joliet, IL: Valued Living Books, Inc.

Morieux, Y., & Tollman, P. (2014). *Six simple rules: How to manage complexity without getting complicated.* Watertown, MA: Harvard Business Review Press.

Rummler, G. A. & Brache, A. P. (1995). *Improving performance: How to manage the white space on the organization chart.* San Francisco, CA: Jossey-Bass Publishers.

Skinner, B. F. (1971). *Walden Two* (1948, 1976, 2005). Indianapolis, IN. Hackett.

Thaler, R.H., & Sunstein, C.R. (2009*) Nudge: Improving decisions about health, wealth, and happiness.* New York, NY: Penguin Books.

RECOMMENDED READINGS: ARTICLES & CHAPTERS

Abernathy, W. B. (2013). Behavioral approaches to business and industrial problems: Organizational behavior management. In G. J. Madden, W. V. Dube, T. D. Hackenberg, G. P. Hanley, & K. A. Lattal (Eds.), *APA handbook of behavior analysis, Vol. 2. Methods and principles* (pp. 501-521). Washington, DC, US: American Psychological Association.

Alavosius, M. A., Getting, J., Dagen, J., Newsome, W., & Hopkins, B. (2009), Use of a cooperative to interlock contingencies and balance the commonwealth. *Journal of Organizational Behavior Management, 29,* 193 – 211.

Alavosius, M. P., Newsome, W. D., Houmanfar, R. & Biglan, A. (2015). A Functional Contextualist Analysis of the Behavior and Organizational Practices Relevant to Climate Change. In Zettle, R. D., Hayes, S. C., Barnes-Holmes, D., & Biglan, A. (Eds). *Handbook of Contextual Behavior Science.* NY: John Wiley & Sons.

Baker, T., Schwenk T., Piasecki M., Smith G. S., Reimer, D., Jacobs N., Shonkwiler, G., Hagen J., & Houmanfar R. A. (2015). Change in a medical school: A data-driven management of entropy. *Journal of Organizational Behavior Management, 35,* 95-122.

Bates, M. (1950). Chapter 18: Tactics, strategy, and the goal. In M. Bates, *The nature of natural history* (pp. 268-284). Princeton: Princeton University Press.

Beckage, B., Kauffman, S, Gross, L. J., Zia, A., & Koliba, C. (2013). More complex complexity: Exploring the nature of computational irreducibility across physical, biological, and human social systems. In H. Zenil (Ed.), *Irreducibility and Computational Equivalence* (pp. 79-88). Berlin: Springer-Verlag.

Baum, W. M., Richerson, P. J., Efferson, C. M., & Paciotti, B. M. (2004). Cultural evolution in laboratory microsocieties including traditions of rule giving and rule following. *Evolution and Human Behavior, 25*(5), 305-326.http://dx.doi.org/10.1016/j.evolhumbehav.2004.05.003

Biglan, A. (2003). Selection by consequences: one unifying principle for a transdisciplinary science of prevention. *Prevention Science, 4,* 213-232.

Biglan, A. (2009). Increasing psychological flexibility to influence cultural evolution. *Behavior and Social Issues, 18,* 1-10.

Biglan, A., & Glenn, S. S. (2013). Toward prosocial behavior and environments: Behavioral and cultural contingencies in a public health framework. In G. J. Madden (Ed), *APA Handbook of Behavior Analysis* (pp. 255-275). Washington, DC: American Psychological Association.

Biglan, A., & Hinds, E. (2009). Evolving prosocial and sustainable neighborhoods and communities. *Annual Review of Clinical Psychology, 5,* 169-196.

Bogard K., Ludwig T., Staats C., & Kretchmer D. (2015) An industry's call to understand the contingencies involved in Process Safety: Normalization of deviance. *Journal of Organizational Behavior Management, 35,* 70-80.

Bosch, S., & Fuqua, W. (2011). Behavioral cusps: A model for selecting target behaviors. *Journal of Applied Behavior Analysis, 34,* 123–125.

Brown, L., & Houmanfar, R (2015). The cost of affluence: A closer look at the food industry. *Behavior and Social Issues, 24*, 4-22.

Chase, J., Houmanfar, R., Hayes, S., Ward, T., Plumb, J., & Follette, V. (2013). Values are not just goals: Online ACT-Based Values Training adds to goal setting in improving undergraduate college student performance. *Journal of Contextual Behavioral Science*, 2, 79-84.

Dickinson, A. M. (2000). The historical roots of organizational behavior management in the private sector: The 1950s-1980s. *Journal of Organizational Behavior Management, 20*(3/4), 9-58.

Diener, L. H., McGee, H., M., & Miguel, C. F. (2009). An integrated approach for conducting a behavioral systems analysis. *Journal of Organizational Behavior Management, 29,* 108-135

Fantino, E. (1985). Behavior analysis and behavioral ecology: A synergistic coupling. *The Behavior Analyst*, 8(2), 151-157. https://doi.org/10.1007/BF03393147

Foxall, G. R (2015). Consumer Behavior Analysis and the marketing firm: Bilateral contingency in the context of environmental concern. *Journal of Organizational Behavior Management*, 35, 44-69.

Foxall, G.R. (2010). Invitation to consumer behavior analysis. *Journal of Organizational Behavior Management, 30*, 92-109.

Galbraith, J. R. (1982). Designing innovative organization. *Organization Dynamics. Winter,* 5-25.

Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: A dynamic systems approach. *Psychological Review*, 113(1), 101. https://doi.org/10.1037/0033-295X.113.1.101

Hantula, D. (2015). Job Satisfaction: The Management Tool and Leadership Responsibility. *Journal of Organizational Behavior Management, 35*, 81-94.

Hayes, L. J., Dubuque, E. M., Fryling, M., & Pritchard, J. K. (2009). A behavioral systems analysis of behavior analysis as a scientific system. *Journal of Organizational Behavior Management, 29*, 315 – 332.

Hayes, S. C., & Sanford, B. (2014). Cooperation game first: Evolution and human cognition. *Experimental Analysis of Behavior, 101,* 112-129.

Herbst, S. A., & Houmanfar, R. (2009) Psychological approaches to values in organizations and organizational behavior management. *Journal of Organizational Behavior, 29,* 47-68.

Houmanfar, R. A., Alavosius, M.P., Morford, Z. H., Herbst, S. A., & Reimer, R. (2015). Functions of organizational leaders in cultural change: Financial and social well-being. *Journal of Organizational Behavior Management, 35*, 4-27.

Houmanfar, R. & Johnson, R. (2003). Organizational Implications of Gossip and Rumor. *Journal of Organizational Behavior Management, 23*, 117-138.

Houmanfar, R., & Rodrigues, N. J. (2006). Behavior analysis & cultural analysis: Points of contact and departure. *Behavior and Social Issues, 15*, 13-30.

Houmanfar, R. A., Rodrigues, N. J., & Smith, G. S. (2009). Role of Communication Networks in Behavioral Systems Analysis. *Journal of Organizational Behavior Management, 29,* 257-275.

Hyten, C. (2009). Strengthening the focus on business results: The need for systems approaches in organizational behavior management. *Journal of Organizational Behavior Management, 29*, 87–107.

Johnson, K., (2015). Behavioral Education in the 21st Century. *Journal of Organizational Behavior Management, 35,* 135-150.

Johnson, R. A., Houmanfar, R., & Smith, G. S. (2010). The effect of implicit and explicit rules on customer greeting and productivity in a retail organization. *Journal of Organizational Behavior Management, 30,* 38-48.

Krapfl, J. E., Cooke, J., Sullivan, T., & Cogar, W. (2009). Iterative processes and reciprocal controlling relationships in a systemic intervention, *Journal of Organizational Behavior Management. 29*, 136 – 154.

Krapfl J. E, & Kruja, B. (2015). Leadership and culture. *Journal of Organizational Behavior Management, 35*, 28-43.

Loehle, C. (2004). Challenges of ecological complexity. *Ecological Complexity*, 1(1), 3-6. *https://doi.org/10.1016/j.ecocom.2003.09.001*

Lydon, C. A., Rohmeier, K. D., Yi, S. C., Mattaini, M. A., & Williams, W. L. (2011). How far do you have to go to get a cheeseburger around here? The realities of an environmental design approach to curbing the consumption of fast-food. *Behavior and Social issues, 20*, 6-23. doi:10.5210/bsi.v20i0.3637

Maraccini, A. M., Houmanfar, R. A., & Szarko, A. (2016). Motivation and complex verbal phenomena: Implications for organizational *research and practice. Journal of Organizational Behavior Management, 36*, 282-300.

Mattaini, M. A. (2007). Editorial: Technical language in cultural analysis. *Behavior and Social Issues, 16*, 1-4.

Mawhinney, T. C. (2009). Identifying and extinguishing dysfunctional and deadly organizational practices. *Journal of Organizational Behavior Management, 29,* 231–256.

Mihalic, M. T., & Ludwig, T. (2009). Behavioral system feedback measurement failure: Sweeping quality under the rug. *Journal of Organizational Behavior Management, 29,* 155–174.

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Rummler, G. (1999). Transforming organizations through human performance technology. In H. D. Stolovitch & E. J. Keeps (Eds.), *Handbook of human performance technology,* (pp. 47-66). San Francisco, CA: Jossey-Bass Pfeiffer.

Sandaker, I. (2009). A selectionist perspective on systemic and behavioral change in organizations. *Journal of Organizational Behavior Management, 29,* 276–293.

Sigurdsson, S. O., & Austin, J. (2006). Institutionalization and response maintenance in organizational behavior management. *Journal of Organizational Behavior Management, 26*(4), 41-77.

Stewart, I., Barnes-Holmes, D., Barnes-Holmes, Y., Bond, F. W., Hayes, S. C. (2006). Relational Frame Theory and Industrial/Organizational Psychology. *Journal of Organizational Behavior Management, 26,* (1/2), 55-90.

Tosti, D., & Herbst, S. A. (2009). Organizational performance and customer value. *Journal of Organizational Behavior Management, 29*, 294 – 314.

Wilhite, C. J. & Houmanfar, R. (2015). Mass news media and American culture: An interdisciplinary approach. *Behavior and Social Issues, 24,* 88-110.

Weick, K. E., & Gilfillan, D. P. (1971). Fate of arbitrary traditions in a laboratory microculture. *Journal of Personality and Social Psychology, 17*(7), 179-191.

Willems, E. P. (1974). Behavioral technology and behavioral ecology. *Journal of Applied Behavior Analysis*, *7*(1), 151-165. ttps://doi.org/10.1901/jaba.1974.7-151

Wilson, D. S., Hayes, S. C., Biglan, A., & Embry, D. (2014). Evolving the Future: Toward a science of intentional change. *Behavioral and Brain Sciences, 37,* 395–460.

Experiential Learning (Practicum/Internship)

Experiential learning could focus on any of a myriad of topics, depending on the individual program and transdisciplinary opportunities; for instance: public policy advocacy, violence, climate change, science policy, governance, business management, public health or criminal justice.

The basis of the experiential learning requirements includes 10 hours a week, 150 hours a semester, for a total of two semesters (300 hours). The experiential learning requirement can be met through the student's professional employment if an appropriate level of supervision or oversight is provided by program faculty and the experiential learning is a requirement for obtaining the degree – that is, if the experiential learning occurs before the degree is awarded. Regardless of the location or nature of the experience, it is incumbent on the program to show how it meets the hourly requirements.

Content Hours:

- 300 hours required (10 hours per week, across 2 semesters)

Course objectives:

- **Saying Doing: The Detection of Micro-Cultural Discrepancies of Saying and Doing.** Upon completion, the student should be trained with a focus on observing the coherence between saying and doing as an expression of the coherence between strategy and culture.
- **Subcultures: Subcultures and Sub-Optimalization.** Upon completion, the student should be able to reveal cultural sub-optimalizations and subcultures.
- **Systems Architecture and Engineering: Cultural Architecture and Systems Engineering.** Upon completion, the student should be able to model alternative ways to disseminate information and reinforce cultural practices by tracing the information and influence flow and identifying network structures.
- **Policy and Cultural Dissemination: Cross Sector and Multidisciplinary Approaches to Complex Societal Challenges.** Upon completion, the student should be able to use the growing body of behavioral insights and debias this process by moving away from sometimes unrealistic assumptions of rationality to discover the actual behavior of individuals through problem identification, behavior analysis, experimentation and trialing that tests multiple policy responses at a smaller scale to determine the best course of action in a cost-effective manner.

Items	Competencies	Core/Foundational Readings	Suggested Readings
A. The detection of micro-cultural discrepancies of saying and doing.	• Identify behavioral patterns that are relative consistent over time, even though the members of the	Backeman, R., & Gottman, J. M. (1997). *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.	

Items	Competencies	Core/Foundational Readings	Suggested Readings
	unit may be exchanged by new ones. • Identify formal and informal intentions, goals, strategies and other description of the organization/cultural unit. • Observe functional relations of behavior in context. Identifying IBCs in possible conflict with expressed goals. • Identify policy documents, and the contingencies under which they are formulated. (policy, politics, ideology, status, managerial preferences) • Observe and identify if behavioral patterns are flexible and thus match the complexity of the environment • Apply techniques of systematic observation of behavior in different contexts.	Biglan, A. (2015). *The Nurture Effect. How the science of human behavior can improve our lives & our world*. Oakland, CA: New Harbinger Publications. Dinsmoor, J. A. (1983). Observing and conditioned reinforcement. *The Behavioral and Brain Sciences, 6*, 693-728. Glenn, S. S., Malott, M. E., Andery, M. A. P. A., Benvenuti, M., Houmanfar, R. A., Sandaker, E., Todorov, J. C., Tourinho, E. Z., Vasconcelos, L. A. (2016). Toward consistent terminology in a behaviorist approach to cultural analysis. *Behavior and Social Issues, 25,* 11-27. Holland, J. G. ((1957). Technique for behavioral analysis of human observing. *Science, 125*, 348-350. Malott, M. E. (2003). *Paradox of organizational change.*	

Items	Competencies	Core/Foundational Readings	Suggested Readings
		Engineering Organizations with Behavioral Systems Analysis. Reno, NV: Context Press. Malott, M. E., & Glenn, S. S. (2006). Targets of intervention in cultural and behavioral change. *Behavior and Social Issues, 15*, 31-56. Martin, P., & Bateson, P.(1993). *Measuring behavior*. New York: Cambridge University Press. Sharpe, T., & Koperwas, J. (2003). *Behavior and Sequential Analyses*. Thousand Oaks, CA: Sage Publications. Skinner, B. F. (1957). *Upon further reflection*. Upper Saddle River, NJ: Prentice-Hall.	
B. Subcultures and sub-optimalization.	• Identify the flow of tangible resources, social reinforcement and technology supporting the processes leading to aggregate product(s).	Alavosius, M., Newsome, D., Houmanfar, R., & Biglan, A. (2016). A functional contextualist analysis of the behavior and organizational practices relevant to climate change. In R. D. Zettle, S. C,	

Items	Competencies	Core/Foundational Readings	Suggested Readings
	• Identify informal power structures (unions, informal hubs in the network). • Identify possible conflict of interests, and how they may relate to the dynamics of the system. Negotiate solutions by showing consequences for the common; natural or manmade.	Hayes, D. Barnes-Holems, & A. Biglan (Eds.), the Wiley *handbook of contextual behavioral science* (pp.530). Malden, MA: John Wiley & Sons. Glenn, S. S., Malott, M. E., Andery, M. A. P. A., Benvenuti, M., Houmanfar, R. A., Sandaker, E., Todorov, J. C., Tourinho, E. Z., Vasconcelos, L. A. (2016). Toward consistent terminology in a behaviorist approach to cultural analysis. *Behavior and Social Issues, 25,* 11-27. Carvalho, L. C., Couto, K. C., Gois, N. S., Sandaker, I., & Todorov, J. C. (2016). Evaluating effects of cultural consequences on the variability of interlocking behavioral contingencies and their aggregate products. European Journa*l of Behavior Analysis, 17*, 1-15. Tagliabue, M., & Sandaker, I. (2019). Societal well-being: Embedding	

Items	Competencies	Core/Foundational Readings	Suggested Readings
		nudges in sustainable cultural practices. *Behavior and Social Issues*. Vasconcelos, L. A. (2013). Exploring macrocontingencies and metacontingencies: Experimental and non experimental contributions. *Suma Psicologica*, *20*, 31-43.	
C. Cultural architecture and systems engineering.	• Identify area of innovation. • Search for best practices. • Conduct a review of best practices and make a contingency analysis of the best practices.	Brayko, C. A., Houmanfar, R. A., Ghezzi, E. L. (2016). Organized cooperation: A behavioral perspective on volunteerism. *Behavior and Social Issues, 25,* 77-98. Glenn, S. S. , & Malott, E. (2004). Complexity and selection: Implications for organizational change. *Behavior and Social Issues, 13*, 89-106. Hayes, S. C., & Toarmino, D. (1995). If behavior principles are generally applicable, why is it necessary to understand cultural diversity? *The Behavior Therapist, 18,* 21-23.	E.M. Rogers (1995): Diffusion of Innovations. Centola, D. (2015). The social origins of networks and diffusion. *American Journal of Sociology*, 120(5), 1295-1338. John Sterman (2000). Business Dynamics: systems thinking and modeling for a complex world.

Items	Competencies	Core/Foundational Readings	Suggested Readings
		Houmanfar, R. A., Alavosius, M. P., Morford, Z. H., Herbst, S. A., & Reimer, D. (2015). Functions of organizational leaders in cultural change: Financial and social well-being. *Journal of Organizational Behavior Management, 35,* 4-27.	
D. Cross sector and multidisciplinary approaches to complex societal challenges.	• Being explicit on the borders between legal, political and behavioral regulations. • Being able to present documentation for evidence. • Having active dialogue with actual citizens and stakeholders. • Reporting failed projects as well as successful projects. • Identifying and defining the problem. Determining the policy level of the project. • Decomposing the policy problem into behavioral insights. • Strategies for behavioral change. Running small scale experiments	Glenn, S. S., & Malott, E. (2004). Complexity and selection: Implications for organizational change. *Behavior and Social Issues, 13*, 89-106. Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational Frame Theory. A Post-Skinnerian account of human language and cognition.* New York: Academic/Plenum Publishers. Harari, Y. N. (2018). 21 Lessons for the 21st Century. New York: Spiegel & Grau. Malott, M. E., & Glenn, S. S. (Submitted 2019). Integrating institutional	Wilson, D. S. and Hayes, S. (2018). Evolution and contextual behavioral science. Peter Turchin (2016). Ultra society, how 10.000 years of war made humans the greatest cooperators on earth.

Items	Competencies	Core/Foundational Readings	Suggested Readings
	and testing. Embedding behavior in cultural practices. • Identify how resources match the outcome of investment e.g. how "one-click solutions" might outcompete huge investments. • Test out a modified version of the best practice in small scale.	and culture-behavioral analysis in the management of common pool resources: Application to an inland lake in Michigan. *Behavior and Social Issues*. Mullainathan, S., & Shafir, E. (2013). Scarcity. New York: Times Books. Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action.* Cambridge, UK: Cambridge University Press. Skinner, B. F. (1957). *Verbal Behavior*. Cambridge, MA: Prentice-Hall. Thaler, R. H., & Sunstein, C. R. (2008). Nudge. Improving decisions, about health, wealth, and Happiness. New York: Penguin Books.	

Course Hours Grid

The grid will auto-populate as part of the online application.

	Basic Principles of Behavior Analysis	Behavioral Systems Analysis	Applying Cultural Analysis on Multi Levels of Organized Complexity
Course Content Hours:	45	45	
Experiential Learning:			300 total hours (10 hours per week, across 2 semesters)

C-BS Compliance Agreement

The C-BS Coordinator and Instructor Agreements state that by submitting the application the information provided is true and accurate. ABAI may copy, release or disseminate course materials, as may in ABAI's sole discretion, be deemed pertinent to C-BS review or disciplinary action. Furthermore, ABAI will use course information as data to evaluate programs. ABAI may also release or disseminate course information in a manner aligning with its mission. Information publicly disseminated will completed with ethical integrity.

Submission of a C-BS application constitutes an agreement that the sequence (including the instructors) will comply with all the rules and standards outlined in this handbook, in ABAI official communications, and at https://www.ABAInternational.org/vcs/culturo-behavior-science.aspx. C-BS Coordinators must inform instructors and students that verified course sequences are subject to the listed ethical and diversity guidelines. Failure to comply with these standards can be grounds for issuance of sanctions against the C-BS, sanctions against instructors, and possible action against the certification status of instructors and coordinators. These sanctions may include suspension of the C-BS. Students must also be informed of the possible sanctions if they advertise their C-BS completion "certification", "accreditation", or similar. ABAI's complaint process may be used to file a complaint or violation against a C-BS.

- ☐ I agree to comply with all terms