Xavier Institute of Management, Bhubaneswar
XIM University

Course Name	**Consumer Neuroscience and Neuromarketing**
Programme	**EMBA (BM)**
Batch	**2023 - 2024**
Term	**III**
Credits	**3**
Course Instructor	**Prof. Dr. Avinash Tripathi and Visiting faculty** **Email: avinash@xim.edu.in** **Office: Room 159, XIMB**

1. Course Introduction:

Within recent years, academic research focusing on the interface between neurosciences, psychology, and marketing has experienced a considerable increase in importance. Consumer neuroscience is an emerging interdisciplinary field that combines psychology, neuroscience, and economics to study how the brain is physiologically affected by advertising and marketing strategies. According to the brain-as-predictor hypothesis, it is assumed that neural processes and certain brain structures play a major role in consumer behavior. Modern techniques and procedures from the fields of radiology and biology allow a direct view into the living brain that provides neurobiological explanation of human behaviour. The objective of this course is to integrate neuroscientific findings, theories, concepts, methods, and applications into the marketing domain. Neuroscience study provides a progressive understanding of the biology underlying human behavior and an opportunity to better understand and predict human behavior—and thus also consumer and buyer behavior.

Though consumer neuroscience and neuromarketing are often used interchangeably in the marketing literature, the former refers to academic research at the intersection of neuroscience, psychology and marketing while the latter generally refers to practitioner or popular interest in neurophysiological tools—such as eye tracking, skin conductance, electroencephalography (EEG), event related potential (ERP) and functional magnetic resonance imaging (fMRI), which are used for conducting commercial market research.

2. Course Objectives:

The course has the following specific objectives.

a. The students will be able to understand neuroscientific theories, methods, and concepts.

b. The students will be able to appreciate tools and techniques used in consumer neuroscience.

c. The students will be able apply the findings from consumer neuroscience to neuromarketing.

Course Content:

The course comprises the following broad topics:

a) Cognitive processes
b) Basic physiological and neural processes underlying consumer decision making
c) The psychophysiological basis of neuroscience
d) Experimental Psychology and methods of neuroscience
e) Methods of research in neuromarketing
f) Consumer neural responses to marketing actions

3. Course Learning Outcomes (CLO):

The course envisages the following learning outcomes:

a) CLO 1: Understand neuroscientific theories, methods, and concepts
b) CLO 2: Appreciate tools and techniques used in consumer neuroscience.
c) CLO 3: Apply the findings from consumer neuroscience to neuromarketing.

4. Readings and References:

a. Textbook: None. Reading material will be provided.

b. Reference textbook

Bridger, Darren. Decoding the Irrational Consumer: How to Commission, Run and Generate Insights from Neuromarketing Research. Kogan Page Publishers, 2015. ISBN-10: 0749473843, ISBN-13: 978-0749473846.

5. Pedagogy:

The pedagogy will include a mix of lecture, cases, simulation/field work/lab visit, assignments, and project. I will share the details of pedagogical mode, evaluation components and deliverables in the initial session. It is expected that you will devote around 4-5 hours per week apart from attending the scheduled classes for the course.

6. Session Plan:

Sessions	Topic	Session Learnings	Suggested Reference
1-2	Exploring the Brain	Nervous System (Peripheral Nervous System and Central Nervous System) Anatomy and the Functional Structure of the Brain	Neuromarketing for Dummies, Chapters 1-2 Plassmann H, Yoon C, Feinberg F, Shiv B (2011) Consumer

		Senses	neuroscience. In: Bagozzi RP, Ruvio A (eds) Wiley international encyclopedia of marketing. Wiley, West Sussex, UK Jarrett, C. (2014). Great myths of the brain. Oxford, UK: Wiley-Blackwell.
3	Cognitive processes	Perception, Cognition, Memory, Learning Types of Memory Conscious and Unconscious Brain Emotions and Motivations Intuitive consumers versus rational consumers	Neuromarketing for Dummies, Chapters 5 and 7 Poldrack RA (2006) Can cognitive processes be inferred from neuroimaging data? Trends Cognit Sci 10(2):59–63
4-5	Brain Research Methods	Lesion Studies MRI, fMRI Near Infrared Spectroscopy (NIRS), PET, Single Cell Recording EEG, ERP, MEG, TMS, Eye Tracking Measuring of Physiological Responses, Face Reading, Response Time Measures	Neuromarketing for Dummies, Chapters 15 Zurawicki L (2010) Neuromarketing, exploring the brain of the consumer. Springer, Berlin Reimann M, Castan˜o R, Zaichkowsky J, Bechara A (2012) How we relate to brands: Psychological and neurophysiological insights into close consumerbrand relationships. J Consum Psychol 22(1):128–142
6-7	Pleasure and Reward	Nonconscious mechanisms Pleasure Desires Rewards Neuroscience and Yearning for	Neuromarketing for Dummies, Chapter 16-20 Shiv Baba, Yoon Carolyn (2012) Integrating neurophysiological

		Comfort Brain Reactions to Consumption, Liking and Preference	and psychological approaches: towards an advancement of brand insights. J Consum Psychol 22(1):3–6
8	Role of Senses in Enhancing Positive Experienc e	Beauty Positive Experience Commonality of Senses Emotions Mood and Behavior	Neuromarketing for Dummies, Chapters 3 and 4 Saad G, Stenstrom E (2012) Calories, beauty, and ovulation: the effects of the menstrual cycle on food and appearancerelated consumption. J Consum Psychol 22(1):102–113 Bercˇ´ık J, Horska´ E, Wang WY, Chen YC (2015) How can food retailing benefit from neuromarketing research: a case of various parameters of store illumination and consumer response. In 143rd Joint EAAE/AAEA Seminar, March 25–27, 2015, Naples, Italy (No. 202714). European Association of Agricultural Economists
9	Cognition as Moderato r	Decision Processing Systems Moods Situational Impact on the Mood Anticipating Emotions Breeding Emotion	Neuromarketing for Dummies, Chapters 5 and 7 Hillenbrand P, Alcauter S, Cervantes J, Barrios F (2013) Better branding: brand names can influence consumer choice. J Prod Brand Manag 22(4):300–308

			Esch FR, Mo¨ll T, Schmitt B, Elger CE, Neuhaus C, Weber B (2012) Brands on the brain: do consumers use declarative information or experienced emotions to evaluate brands? J Consum Psychol 22(1):75–85
10	Neural Aspects of Decision-Making	Neural aspect of coping with Risk Judgment heuristics Mathematical Mind Neural aspect of Framing Neural aspect of Endowment Effect and the Loss Aversion Neural aspect of Reversal of Preference Neural aspect of Choice Dilemma	Neuromarketing for Dummies, Chapter 8 Lee EJ, Kwon G, Shin HJ, Yang S, Lee S, Suh M (2014) The spell of green: can frontal EEG activations identify green consumers? J Bus Ethics 122(3):511–521
11	Brand and the Brain	Intuition and Decisions Feeling Opinion Forming Regret and Post Decision Evaluation	Neuromarketing for Dummies, Chapter 3 Litt A, Shiv B (2012) Manipulating basic taste perception to explore how product information affects experience. J Consum Psychol 22(1):55–66
12-13	Neuroscience and Segmentation	Personality Traits and Personality Differences The Personality Connection Buying Styles Segmentation from the Neurophysiological Perspective	Neuromarketing for Dummies, Chapter 9-14 Milosavljevic M, Navalpakkam V, Koch C, Rangel A (2012) Relative visual saliency differences induce sizable bias in consumer choice. J Consum Psychol 22(1):67–74 Esch FR, Mo¨ll T, Schmitt B, Elger CE, Neuhaus C, Weber

			B (2012) Brands on the brain: do consumers use declarative information or experienced emotions to evaluate brands? J Consum Psychol 22(1):75–85
14-15	Neuro-segmentation and Positioning	Neural Conditionings of Buying Practicality of the Neuro-segmentation Neuro- Positioning of Brands	Neuromarketing for Dummies, Chapters 21-22 Donoghue J (2015) Neurotechnology. In: Marcus G, Freeman J (eds) The future of the brain: essays by the world's leading neuroscientists. Princeton University Press, Princeton, NJ, pp 219–233 Esch FR, Mo¨ll T, Schmitt B, Elger CE, Neuhaus C, Weber B (2012) Brands on the brain: do consumers use declarative information or experienced emotions to evaluate brands? J Consum Psychol 22(1):75–85
16-17	Neuroscience and Advertising	Neuroscience and Marketing Decisions Neuroscience applied in Advertising Ads in Video Games	Neuromarketing for Dummies, Chapter 3 Block MP, Schultz DE, Breiter H, Blood A, Calder B, Chamberlain L, Zhang F

		Testing Products with Neuroscience	(2015) Redefining neuromarketing. In: American Academy of Advertising, Conference, Proceedings (Online) American Academy of Advertising, p 53
18	Ethical and other dimensions	Ethical issues Current and future marketing applications	Ariely D, Berns GS (2010) Neuromarketing: the hope and hype of neuroimaging in business. Nat Rev Neurosci 11(4):284–292 Kennedy, R., & Northover, H. (2016). How to Use Neuromeasures To Make Better Advertising Decisions: Questions Practitioners Should Ask Vendors and Research Priorities for Scholars. Journal of Advertising Research, 56(2), 183–192. Kühn, S., Strelow, E., & Gallinat, J. (2016). Multiple "buy buttons" in the brain: Forecasting chocolate sales at point-of-sale based on functional brain activation using fMRI. NeuroImage, 136, 122–128. Lee, N., Chamberlain, L., & Brandes, L. (2018). Welcome to the jungle! The neuromarketing literature through the eyes of a newcomer. European Journal of Marketing, 52(1–

			2), 4–38.
19-20		Classroom project/case/ simulation/research study presentations	

7. **Assessment Scheme:**

Component	**Weightage**	**Duration (Minutes)**	**Assessment of Course Learning Outcome(s) (CLO)**
Quizzes (MCQ, ten marks*2 quizzes)	20	7-8 minute each	CLO 1
Project (group submission)	10	NA	CLO 1, CLO 2, and CLO 3
Class Participation	10	NA	CLO 1 and CLO 2
Case Analysis and Participation	10	NA	CLO 1 and CLO 2
Mid-term	20	NA	CLO 1, CLO 2, and CLO 3
End-term	30	180	CLO 1 and CLO 2

Group Project and Presentation:

Details of the project will be provided to the students separately in the first session.

This course also proposes a lab visit to understand the practical aspects of Consumer Neuroscience and Neuromarketing.

8. **Academic Discipline and Integrity:**

You are expected to be regular and on time in the class. Late comers will not be excused. Students involved in academic misconduct, dishonesty, misrepresentation, plagiarism in any form (For instance: copying or use of unauthorized means in exams, aiding and abetting another student's dishonesty; free-riding in group activities, unprofessional classroom conduct and behavior, doing unauthorized class recording, sharing class recording with others, reading anything else or doing other unrelated work during class etc) will attract serious penalty in form of grade deductions or even worse outcome (like getting F). You are expected to adhere to deadlines. Exceptional case (such as medical or family emergencies) can be excused only when supported with proper evidence. All group members must contribute equally toward project and participate in final presentation. I reserve the right to

make the any alteration in course outline and/or evaluation component(s) during the timeline of the course administration, if needed.

9. Policy on plagiarism:

Any plagiarism beyond 20% found in the submission (including reproduction from books, online sources, journals or from peers) will just award zero.

10. Mapping Course Leaning Outcomes (CLO) with the Program Learning Goals (PLG):

PLG#	Program Learning Goal	Trait	Addressed by Course	
			Yes	No
PLG1	Functional and Business Skills	Demonstrate understanding of elements of all functional areas.	Yes	
PLG2	Analytical Skills	Use analytical techniques to identify a business problem and suggest a solution.		
PLG3	Collaboration and teamwork attributes	Exhibit voluntary cooperation and effective teamwork in a group setting.		
PLG4	Ethical responsibility	Understand the ethical complexities of conducting business.		
PLG5	Communication	Produce reasonably good quality business documents.		