OPERATIONS MANAGEMENT SYLLABUS
The Heller School for Social Policy and Management, Brandeis University

HS-258A-1, Spring, 2019, V1.1 (2/7/2019)

Professor Joel Cutcher-Gershenfeld
Office Location: Room 202
Office Hours: Thursdays 1:00-3:00 PM
e-mail: joelcg@brandeis.edu

Class Meeting: 9:00 a.m. to 11:50 a.m.
Classroom: Schneider & Family Building G4

Teaching Assistant: Viveka Zawisza
vpzawisza@brandeis.edu
Office hours: email to arrange

Prerequisite: Statistics
HBSP Coursepack:
https://hbsp.harvard.edu/import/603390

Program Administrator: Norma DeMattos
ndemat@brandeis.edu, X63866

Heller Diversity Pledge: This class operates with a full commitment to all elements of the Heller Diversity Pledge:
• To make Heller a safe and welcoming place for all people.
• To be aware of my own biases against people who are different from me, and to hold myself accountable for my actions and words, even if it is uncomfortable.
• To engage in respectful dialogue and language that is responsible and sensitive to the opinions of others and free of rancor and attack, in and outside the classroom.
• To intentionally and consistently act to address societal inequity and injustice in the broader community.
• Ultimately, I pledge to work for a world in which everyone is free to be who they are and can lead fulfilling lives, without having to overcome discrimination.

Course Aim: Increase your expertise in managing the flow of services and materials in order to better deliver value to diverse stakeholders – implementing and sustaining continuous improvement in operations, including operational improvement associated with social justice.

Course Objectives: At the completion of this course you should be able to:
• Understand the different functions within operations, and evaluate how effectively those elements are designed and integrated within specific operational systems
• Analyze and assess the performance of production and delivery processes, and be able to describe the unique characteristics of service operations
• Conduct a process review, diagnose problems in an operations environment, and formulate solutions for improvement using quantitative analysis
• Apply quality management concepts and tools to a variety of operations
• Appreciate issues of power, diversity, and inclusion in the context of operations and continuous improvement
• Describe how operations activities relate to other functional areas and enterprise strategy

COURSE OVERVIEW
Part I. Introduction

Session 1  Wed. January 18th – Course Introduction and the Operations Mindset

Part II. Process Flow

Session 2  Fri. January 25th – Process Fundamentals

Session 3  Fri. February 1st – Capacity, Demand, Work Flow Diagrams, and Value Stream Mapping
  •  Field project proposal due

Session 4  Fri. February 8th – Process Flow and Inventory Analysis in Service Operations

Part III. Process Improvement

Session 5  Fri. February 15th – Quality Principles, Statistical Process Control and Six Sigma

  No Class – February 22nd

Session 6  Fri. March 1st – Policy Deployment (Hoshin Konri) and Performance Metrics
  •  First written case analysis due

Session 7  Fri. March 8th – Continuous Process Improvement (Kaizen) and Quality Operating Systems (note time and date change)

Part IV. Systems Operations

Session 8  Fri. March 15th – Cross-Functional Coordination Enabling Operations
  •  2+2 pairing of teams for field projects

Session 9  Fri. March 22nd – Operations in Developing Countries and on Digital Platforms

Session 10  Fri. March 29th – Supply Chain Management
  •  Second written case analysis due

Part V. New Frontiers

Session 11  Fri. April 5th – Systems Transformation and Data Analytics

Session 12  Fri. April 12th – Social Protest Operations

  No Classes – April 19th and April 26th

Session 13  Thurs. May 2nd – Concluding Presentations
  •  Field projects due (sides at 1:00 the day before class; papers at 1:00 on the Monday after class)
Course Description:

*Operations involve a sequence of activities organized for the purpose of making and delivering a product or service.* This course prepares you to analyze, design, manage and improve operational work processes in social mission-driven organizations to meet the needs of clients, while engaging both staff, volunteers, and clients in achieving the mission. We explore ways to achieve quality outcomes without sacrificing efficiency and vice versa, given the resource constraints faced by many mission-driven organizations.

You will develop skills including quality assessment, process mapping, productivity analysis, process improvement by employing quality management techniques, capacity management analysis, customization versus standardization of work processes, balancing supply and demand, coordination of process elements, stakeholder alignment within operations and across other organizational functions. We will use a series of cases, articles, exercises, guest speakers and online simulations. Cases will be drawn from both product and service operations. Emphasis will be placed on hands-on learning where possible, and case analyses and recommendations will focus on practical, action-oriented management steps to achieve desired outcomes, using evidence available. Two written case analyses will be completed during the term.

To practice the application of concepts discussed in this course, you will conduct a process analysis and design project in a real-world setting. Groups of students will form teams, and then choose an organization and a work process to focus on within that organization. Through direct observations and interviews, student teams will map out their chosen work process. They will then analyze the work process, assessing how efficiently resources are used, and how effectively the process works for customers. Teams will make recommendations for process improvement, with specific actions and expected outcomes as a result of those changes. In-class team presentations and a final report will complete the deliverables.

Class participation is essential for this course so that we can take advantage of the experience and insights of class members. We want to explore how, why, and under what circumstances various approaches to operations management are effective or ineffective. Students’ previous experiences, both positive and negative, are a valuable source of data for this learning. Class participation also gives students the opportunity to develop an important management skill – articulating a point of view to one’s colleagues for the purpose of learning and decision-making.

Course Requirements: You must demonstrate the ability to apply concepts and techniques for designing, analyzing and improving operations. Performance will be assessed as shown below:

<table>
<thead>
<tr>
<th>Two Written Case Analyses</th>
<th>20% each x 2 = 40%</th>
<th>First case due Session 6 and second due Session 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Process Analysis</td>
<td>10%</td>
<td>Slides due at 1:00, the day before Session 13</td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Process Analysis Paper</td>
<td>30%</td>
<td>Paper due at 1:00, the Monday after Session 13</td>
</tr>
<tr>
<td>Class Participation</td>
<td>20%</td>
<td>All sessions but the first and last</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
You are expected to be proficient in the use of Microsoft Excel for quantitative analysis, PowerPoint for presentations, and Word (or equivalent software) for written work.

**Case Analyses.** You will be asked to submit written analyses of two specific cases during the semester. Case analyses are due at the beginning of the class in which the case will be discussed. You will be asked to take the role of a protagonist in each case. The assignment will specify the operations questions to be addressed. You should work independently on this assignment.

Each case write-up will be a 2 to 3-page **business memo**, summarizing the findings from your analysis, the choices facing the organization, and your specific, practical recommendations for action on the issues involved. Citations to reference material should be integrated into the text of your memo in the way you would do so in an organizational setting. This includes references to material from books, articles, and internet sources. A full set of citations should be included on a separate page at the end and is not part of page count.

The rubric for grading a case analysis is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisp executive summary</td>
<td>20</td>
</tr>
<tr>
<td>Analysis of choices facing the organization</td>
<td>50</td>
</tr>
<tr>
<td>Specific practice recommendations</td>
<td>20</td>
</tr>
<tr>
<td>Creativity and innovation in the analysis</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Class Participation.** Class participation grades reflect my assessment of your total contribution to the learning environment. This reflects not only the frequency of your contributions in class, but also their quality (ability to draw on course materials and your own experience productively, ability to advance or sharpen in-class discussion and debate, willingness to take risky or unpopular points of view, use of logic, precision and evidence in making arguments), and the professionalism of your conduct (attendance, punctuality, preparedness, and showing respect to all class members and their class contributions).

**Attendance.** You are expected to attend all classes and be punctual for class start times. If you cannot be present or will be late or need to leave early, please notify me in writing as soon as possible. Missing more than one class will affect your participation grade.

If you must miss a class (or will be late), please advise me in advance by email. If you receive an excused absence, you can still get partial credit by writing a one-page paper on lessons learned based on the readings for that week and interviews with three students who were in class. That paper is due within five days after the class.

**Process Analysis Team Project.** You will be asked to form a team of 2 to 3 students in the second week of the term. Your team will choose one particular work process in an organization you have access to and can directly observe the operational activities. You will map the process using a work flow diagram or value stream map, analyze it, and provide recommendations for improving it, as well as provide anticipated costs and benefits resulting from those actions.

Half-way through the term you will be paired with a team working in a similar sector to compare/contrast the findings. The final written report and the final presentations will be by the combined teams.
You will be expected to utilize whatever concepts, tools and techniques from the course are relevant to that specific situation when making your analysis and recommendations. Here are the key milestones for this assignment:

| Proposal due (team members, topic, organization) | Session 3 |
| Field data collection and literature review | (out of class during Sessions 4-7) |
| Pairing of teams | Session 8 |
| Combined presentation (paired teams) | Session 13 |

Your projects will be evaluated based on how well you observe and analyze each work processes, how insightful your recommendations are for improving each work process, how effectively the recommendations are linked to your analysis, and how well you integrate lessons across the two settings. In general, analysis and presentations should take into account all elements of the DMAIC model: Define, Measure, Analyze, Improve, Control (DMAIC).

The final paper will have three parts, which are as follows (with target page lengths listed):
- Team 1 introduction, diagrams, analysis, recommendations – 4-7 pages single-spaced
- Team 2 introduction, diagrams, analysis, recommendations – 4-7 pages single-spaced
- Integrative conclusions – 1-2 pages single-spaced

Citations to reference material should be integrated into the text of your analysis in the way you would do so in an organizational setting. This includes references to material from books, articles, and internet sources. A full set of citations should be included on a separate page at the end as part of academic integrity and is not part of page count. In the final paper and presentation, do not include individual’s names – just their role or title (to reduce risk to those individuals). Charts, images and tables in the appendix do not count toward the 4-7 pages for each team.

The rubric for grading the process analysis is as follows:

| Executive summary | 10 points |
| Define the problem | 10 points |
| Measure the key elements of the problem | 15 points |
| Analyze the data (using additional sources as appropriate) | 20 points |
| Improvement recommendations – social and technical | 15 points |
| Control plan – social and technical | 10 points |
| Creativity and innovation in the analysis and visuals | 10 points |
| Combined integrative analysis by both teams | 10 points |
| **Total:** | **100 points or 30%** |

Presentations are limited to 7 minutes, with no more than 10 powerpoint slides (not counting the cover slide) and should inform the class on each project (4 slides each), as well as the lessons from comparing and contrasting them (2 slides). All team members should participate in the presentation.

The rubric for grading the class project presentations is as follows:

| Clear and compelling slides | 20 points |
| Convincing presentation of analysis and recommendations | 40 points |
| Balanced contributions by all team members | 20 points |
| Creativity and innovation in the presentation | 20 points |
| **Total:** | **100 points or 10%** |
Additional 2+2 Term Project Assignment Guidance

This team field project enables you to apply the skills you have learned during the course. You will form a small team of 2 people (3 in some cases). Together, you will identify an organization to study and focus on a specific process in that organization. Part way through the fieldwork you will be joined with a second team (hence the 2+2 title), which will allow you to compare and contrast findings.

The organization studied can be for-profit or non-profit. However, please get my approval before choosing an organization that you have analyzed for another course or one in which a team member is recently or currently employed. As with any field project, the first principle is “do no harm” and the risk is higher if a team member is currently working in the organization or has recently done so.

In conducting the field observation, you will need to “go and see” in order to collect process data. In some exceptional circumstances this can be done virtually, such as an organization in another city or country, but it will be more challenging. You can use any of the course concepts in your analysis and you should use more than one concept. You may need to consult additional sources in order to apply the concepts to your situation, which you are encouraged to do.

The due date for the powerpoint presentation component of this assignment is noon on the day before our last class and the paper component is due at noon on the Monday after our last class. Please note that late submissions will incur a grade point penalty.

Course Reading:


Additionally, we will use cases, articles and online simulations from Harvard Business School Publishing (HBSP), as well as monographs and cases posted on LATTE by permission from other sources. You will need to create an account with HBSP and then to purchase the required Course Pack online established for this course.

Provisions for Feedback: Case analyses will normally be returned 7 days after they are submitted to me. Class participation grades and Team Process Analysis Project grades will be given at the end of the semester. I will provide interim feedback on class participation during the course of the term and I will seek class feedback on our shared learning process.

Provision for inclement weather: If Brandeis University is closed due to weather (you can check on the Brandeis website) the class will be held online via Zoom and I will send instructions for Zoom access.

Academic Integrity: Academic integrity is central to the mission of educational excellence at Brandeis University. Each student is expected to turn in work completed independently, except when assignments specifically authorize collaborative effort. It is not acceptable to use the words or ideas of another person – be it a world-class philosopher or your project partner – without
proper acknowledgement of that source. This means that you must use footnotes or other appropriate citations and quotation marks to indicate the sources of any phrases, sentences, paragraphs or ideas found in published books, articles, material on the internet, or the ideas of another student.

Violations of university policies on academic integrity, described in Section 3 of Rights and Responsibilities, may result in failure in the course or on the assignment, and could end in suspension from the University. If you are in doubt about the instructions for any assignment in this course, you must ask for clarification.

Notice: If you have a documented disability and require any accommodations, please bring them to my attention prior to the second meeting of the class. If you have any questions about this process, contact Ravi Lakshmikanthan, disabilities coordinator for the Heller School, at kanthan@brandeis.edu or 781-736-2753.
COURSE SCHEDULE

Part I. Introduction

Session 1  Fri. January 18th – Course Introduction and the Operations Mindset

Motivating Questions: Who is in the class? What are our shared learning objectives? How is this course organized? What are the expectations and deliverables? What is the case method for learning? What is an operations mindset?

Preparation Assignment: Pick an organization in which you have worked or with which you are very familiar. Focus in on a work process and, on a single slide (PowerPoint or otherwise), specify the following:

- The value proposition for a key customer, client, or stakeholder
- The steps in the work flow associated with delivering on the value proposition
- The metrics used to measure success

Please bring a printed copy of your slide to class – with your name on it.

In-Class Simulation: Tinker toy tower construction exercise

Part II. Process Flow

Session 2  Fri. January 25th – Process Fundamentals

Motivating Questions: What is operations management? How do we look at and analyze processes? What are the key elements and concepts? How do you analyze the capacity of a process? What are typical management issues related to providing sufficient capacity cost-effectively?

Required Case to Prepare for Discussion:

Beleza Natural, by Omar Besbes; Nelson M. Fraiman; Marcelo Olivares; Maria J. Quinteros; Gabriel Y. Weintrau (CU50-PDF-ENG), HBSP

Required Readings:

Process Fundamentals by Ann E. Gray; James Leonard (696023-PDF-ENG), HBSP

George, Michael L. (2005) The Lean Six Sigma Pocket Toolbook –Chapter 4: Voice of the customer

Recommended Readings (optional):

Graban, Mark (2012) Lean Hospitals, Chapter 3: Value and Waste
Note on the Management of Queues, David Maister, HBSP
Note on Managing Process Flows, HBSP
Session 3  Fri. February 1st – Capacity, Demand, Work Flow Diagrams, and Value Stream Mapping

Motivating Questions: How do we plan for and effectively deliver products and services to meet variable demands?

Required cases to read and prepare for discussion:

Donner Company case, HBSP

Required Readings:

George, Michael L. (2005) The Lean Six Sigma Pocket Toolbook – Chapter 3: Value stream mapping and process flow tools

Recommended Readings (optional):

Graban, Mark (2012) Lean Hospitals, Chapter 4: Observing the Process and Value Streams

Comments: In this session we will examine a case that highlights the importance of operational effectiveness on the performance of the firm. Analyzing process flows and revising operating parameters, whether related to customer service functions or production processes (Donner), are fundamental skills needed in operations management. Process mapping and value stream mapping tools and methods will be introduced.

Note: The Team Process Analysis Project will be discussed.

Session 4  Fri. February 8th – Process Flow and Inventory Analysis in Service Operations

Motivating Questions: How is the design of physical facilities, deployment of people resources, operating procedures, and variability relevant to operational systems and overall performance?)

In-Class Online Simulation:

Operations Management Simulation: Benihana V2, HBSP

Required Readings:

Breaking the Trade-Off Between Efficiency and Service, Frances Frei, HBSP

Recommended Readings (optional):

Graban, Mark (2012) Lean Hospitals, Chapter 9: Improving Flow

Comments: This session brings together most of the major forces affecting operations. Students will run the Benihana simulation in class to experience the interplay of design, operating rules, demand variability, and other factors in a restaurant operation.
Part III. Process Improvement

Session 5  Fri. February 15th – Quality Principles, Statistical Process Control and Six Sigma

Motivating Questions: What is Quality Management? What are the fundamental elements of Process Improvement? What is the history, how did these philosophies and techniques develop? What is Lean? Six Sigma? How do these concepts relate to each other? What does any of this have to do with the design and delivery of healthcare or other services?

Required Case to Prepare for Discussion:

Cincinnati Children’s Hospital Medical Center, HBSP

Class Resource:

GBMP DVD: Doctor Visit Kaizen Value Stream Mapping. Instructions will be available on LATTE. Watch Parts 1 & 2.

Required Readings:

George, Michael L. (2005) The Lean Six Sigma Pocket Toolbook – Chapter 1: Using DMAIC to improve speed, quality, and cost; and Chapter 2: Working with ideas


Recommended Readings (optional):

Graban, Mark (2012) Lean Hospitals, Chapter 5: Standardized Work as a Foundation of Lean

Graban, Mark (2012) Lean Hospitals, Chapter 10: Engaging and Leading Employees

No class – February 22nd

Session 6  Fri. March 1st – Policy Deployment (Hoshin Konri) and Performance Metrics

Motivating Questions: What Key Performance Indicators (KPIs) lead and lag process improvement? How are performance metrics aligned at all levels in an organization? What performance metrics are particularly relevant for different types of service
organizations? What are the limits of performance metrics as a guide for process improvement?

Written Case Assignment:

Sof-Optics case, HBSP

Note: The Written Case Analysis is due. You will apply these concepts in an analysis and written assignment of the case. You should work independently on this assignment

In-Class Simulation:

Deming’s red bead experiment

Required Readings:

George, Michael L. (2005) The Lean Six Sigma Pocket Toolbook –Chapter 7: Variation analysis, and Chapter 8: Identifying and verifying causes


Recommended Readings (optional):


Note: The Team Process Analysis Project teams will be paired.

Session 7  Fri. March 8th – Continuous Process Improvement (Kaizen) and Quality Operating Systems

Motivating Questions: What is the Toyota Production System — TPS — and why is it important? How do we apply the Lea philosophy in both manufacturing and service operations?

Required cases to prepare for discussion:

The Perfect Storm: A Low-Performing Biotech Plant, by Robert D. Landel; Rebecca O. Goldberg (UV6034-PDF-ENG).

Required Readings:

George, Michael L. (2005) The Lean Six Sigma Pocket Toolbook –Chapter 5: Data collection, and Chapter 6: Descriptive statistics and data displays

Decoding the DNA of the Toyota Production System, HBSP

Recommended Readings (optional):


How to Change a Culture: Lessons From NUMMI, HBSP

Fixing Health Care from the Inside, HBSP

Part IV. Systems Operations

Session 8  Fri. March 15th – Cross-Functional Coordination Enabling Operations

Motivating Questions: What kinds of activities must operations managers coordinate to ensure effective performance of the entire system? In what ways do they orchestrate the variety of activities needed to deliver products or services, both inside and outside their organizations?

Required Case to Prepare for Discussion:

MGH PATA, available on LATTE

Required Readings:

Coordination: An Overview, HBSP


Recommended Readings (optional):


Comments: Coordination is one of the fundamental roles in operations management. This session explores aspects of Coordination and builds on process analysis and improvement work.

Session 9  Fri. March 22nd – Operations in in Developing Countries and on Digital Platforms

Motivating Questions: How do operations within not-for-profit organizations differ from the for-profit sector? What are the additional complexities associated with NGOs and operations in developing countries?

Required Cases to Prepare for Discussion:
**VidaGas: VillageReach - The Mozambican Foundation for Community Development Joint Venture**, HBSP

Opening the Valve: From Software to Hardware (A); Ethan S. Bernstein, Francesca Gino, Bradley R. Staats (415015-PDF-ENG), HBSP

**Required Readings:**


**Recommended Readings (optional):**

Graban, Mark (2012) *Lean Hospitals*, Chapter 8: Preventing Errors and Harm

**Comments:** This session uses the VidaGas case to explore the unique characteristics of not-for-profit operations in developing countries.

**Session 10  Fri. March 29th – Supply Chain Management**

**Motivating Questions:** What is Supply Chain Management? What are the key elements? What about forecasting, balancing supply and demand? How can “big data” and analytics be applied in mission-driven organizations?

**Written Case Assignment:**

Pediatric Orthopedic Clinic at the Children’s Hospital of Western Ontario (Robert Klassen, Kellie Leitch, Manpreet Hora), HBSP

**Note:** The Written Case Analysis is due. You will apply these concepts in an analysis and written assignment of the Pediatric Orthopedic Clinic case, involving patient flow and service challenges. You should work independently on this assignment.

**Required Readings:**

George, Michael L. (2005) *The Lean Six Sigma Pocket Toolbook* –Chapter 9: Reducing lead time and non-value add cost

Supply Chain Management article on LATTE

**In-Class Online Simulation:** Root Beer Game, HBSP.

**Recommended Readings (optional):**

Making Supply Meet Demand in an Uncertain World, HBSP

What Is the Right Supply Chain for Your Products? HBSP


**Part V. New Frontiers**
Session 11  Fri. April 5th – Systems Transformation and Data Analytics

**Motivating Questions:** How do integrated operating assumptions provide a window into operating systems? What is involved in changing operating assumptions? How do pivotal events add up to a transformation in operating systems?

**Motivating Questions:** What can we learn from viewing social protests through an operations lens? Is there such a thing as an efficient or inefficient action?

**Required Case to Prepare for Discussion:**
Frogetek: Mobile Technology for Micro-Retailing by Margaret Pierson; Garrett J. van Ryzin (CU36-PDF-ENG), HBSP

Cross-cultural negotiation simulation

**Required Readings:**

George, Michael L. (2005) *The Lean Six Sigma Pocket Toolbook* –Chapter 10: Complexity value stream mapping and complexity analysis, and Chapter 11: Selecting and testing solutions

**Recommended Reading (optional):**
Staples: A Year in the Life of a Start-Up by Myra M. Hart (800241-PDF-ENG)

Graban, Mark (2012) *Lean Hospitals*, Chapter 11: Getting Started with Lean


**Comment:** New forms of data analytics are relevant across diverse organizational settings and are advancing the frontier for operations management.

Session 12  Fri. April 12th – Social Protest Operations

**Required Cases to Prepare for Discussion:**
*We are Market Basket, MIT* by Zeynep Ton, Thomas Kochan and Cate Reavis on LATTE


Additional review of primary materials found on-line and through interviews, including these materials from the first Ford Hall occupation (and other more current materials): https://lts.brandeis.edu/research/archives-speccoll/exhibits/ford/occupation/index.html
A portion of class time will also be available for students to work on their Team Process Analysis projects.

No Classes – April 19th and April 26th

Session 13 Thurs. May 2nd – Concluding Presentations:

Each of the Team Pairs will present both of their Process Analysis & Improvement Projects in class (as a combined presentation).

The two teams in each 2+2 group should prepare a joint Powerpoint presentation with no more than 4 slides each and no more than 2 integrative slides, for a total of 10 slides (not counting the cover slide). The joint presentation should be no more than 7 minutes and all team members should present some part of the material.

The due date for the powerpoint presentation component of this assignment is 1:00pm on the day before the last class and the paper component is due at 1:00pm on Monday following the last class. **Please note that late submissions will incur a grade point penalty.** Please send your slides and your paper by e-mail with the last names of your team members in the subject line.
Emergency Response Recommendations

In any organization, safety is the number one consideration. The Department of Homeland Security recommends the following three responses to any emergency on campus: **RUN > HIDE > FIGHT**

**ONLY FOLLOW THESE ACTIONS IF SAFE TO DO SO.** When in doubt, follow your instincts—you are your own best advocate!

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**RUN**

Action taken to leave an area for personal safety.
- Take the time now to learn the different ways to leave the building **BEFORE** there is an emergency.
- Evacuations are mandatory for fire alarms and when directed by authorities. **No exceptions!**
- Evacuate immediately. Pull manual fire alarm to prompt a response for others to evacuate.
- Take critical personal items only (keys, purse, and outerwear) and close doors behind you.
- Assist those who need help, but carefully consider whether you may put yourself at risk.
- Look for **EXIT** signs indicating potential egress/escape routes.
- If you are not able to evacuate, go to an Area of Rescue Assistance.
- Evacuate to Evacuation Assembly Area and remain until additional instructions are given.
- Alert authorities to those who may need assistance.
- Do not re-enter building until emergency response personnel indicate that it is safe to do so.

**ACTIVE THREAT:**
- If it is safe to do so run out of the building. Get as far away as possible.

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**HIDE**

Action taken to seek immediate shelter indoors when emergency conditions do not warrant or allow evacuation, such as for severe weather.
- Take the time now to learn the different ways to seek shelter within your building **BEFORE** there is an emergency.
- If you are outside, proceed to the nearest protective building.
- If sheltering-in-place due to severe weather, proceed to the identified Storm Refuge Area or to the lowest, most interior area of the building away from windows or hazardous equipment or materials.

**ACTIVE THREAT:**
- Lock or barricade your area.
- Get to a place where the threat cannot see you.
- Place cell phones on **silent**.
- Do not make any noise.
- Do not come out until your are advised it is safe.

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**FIGHT**

Action taken as a last resort to increase your odds for survival.

**ACTIVE THREAT:** If you cannot run away safely or cannot hide, **be prepared to fight with anything available to increase your odds for survival.**