

COLLAPSED STRUCTURE SEARCH AND RESCUE (CSSR)

LESSON 1 — OVERVIEW

Course Introduction

Duration	<ul style="list-style-type: none">• Lector:01 Period•
Main Points	<ul style="list-style-type: none">• Participant Introduction• Participants' Expectations• Course Materials• Participants' Equipment• Course Purpose, Instructional Objectives, Performance Objects• Course Methodology• Evaluation Method and Participants' Codes• Course Schedule and Attendance• Participants' Feedback• Forms, Pre-work• Facilities and Ground Rules• File• Pre-test
Suggested Preparation	<ul style="list-style-type: none">• Generally given by the course coordinator• Thoroughly study the Reference Material.• Based on the Lesson Objectives, highlight the reference material (RM -1) on related subjects.• Check the WB and fill in the blanks to guide you in helping participants with needed information.• This is an informational lesson only and has no practical application.• Before the beginning of the lesson, introduce all of the instructors, assistants, and support personnel• Each participant should have a tool, equipment or accessory placed in front of him so it can be presented along with the participant• Blank flipchart sheets should be used for the file located on the wall near the instructor.
Evaluation System	No evaluation for this lesson.

Materials and Resources Needed	<ul style="list-style-type: none"> PowerPoint Presentation slides (11) Flipchart (3) Flipchart board Flipchart pad Markers of various colours Each participant should have all of his PPE which will be checked by the instructor. Different tools, equipment, accessories for each participant Masking tape This lesson is essential to both instructors and participants because it sets forth all
Importance of This Lesson	<ul style="list-style-type: none"> Requirements and expectations from the participants in order to successfully complete the course

01

COURSE

INTRODUCTION

Lecture :- 01 Period

LESSON OBJECTIVES

**Upon completion of this lesson,
you will become familiar with:**

- Names and background information of the course coordinator, instructors, assistants, support staff and the other participants.
- The following aspects of the course will be covered in this lesson:
 - Expectations
 - Purpose
 - Objectives
 - Methodology
 - Testing
 - Materials
 - Logistics and agenda
 - Course overview and its relation to the OFDA's PEER

Instructor Activity

► PPT 1-1 to PPT 1-2

Introduce yourself and your assistant.

Present the lesson with a description of the contents and presents the rules and the course.

Present lesson objectives.
Ask a participant to read them aloud from the workbook.

Ask participants to close their workbooks for the time being.

Give a brief explanation and description of the CSSR Course and its origins, as it relates to the OFDA/Program for Enhancement of Emergency Response-PEER. The second phase (2003-2008) of the program is implemented by the National Society for Earthquake Technology-Nepal.

► PPT 1-4 to 1-7

Give PEER networking strategies.

Risk of earthquakes and collapses in the region.

- Possible use of short videotape (no more than 8-10 minutes) or show slides of rescue operation done.
- Process of creating a CSSR Team.
- Requirements for taking the CSSR Course.

1

Getting to Know Each Other

The Course Coordinator, instructors, assistant, and support personnel should introduce themselves to the group.

The Course Coordinator will conduct an exercise so that you may become familiar with the other participants and become familiar with some of the tools, equipment, and accessories you will be using throughout the course.

Allotted time: 20 minutes

2

Participants' Expectations

The purpose of this short exercise is to find out what your expectations of the Collapsed Structure Search and Rescue Course are – knowledge you hope to gain, skills you hope to acquire, etc.

Instructor Activity

- ▶ Make sure each participant has been assigned a tool, piece of equipment or accessory for the introduction exercise.

Explain the purpose is to become familiar with each other. At the same time, it will allow them to become familiar with some tools and equipment that they will be using.

Each participant has one minute to speak. Ask each one to introduce him/herself, then to present the item he/she has been assigned, indicating any other names by which it is known, how it is used, and any other basic information.

Once the exercise is complete, the assistant collects all the tools and equipment.

Ask participants to write their nicknames in their name tents and tags.

- ▶ Set up participants in groups of four and ask each group to write on a flipchart paper two or more expectations they have of the course. Allow 10 minutes.

After everyone is done, ask a representative from each group to read their expectations aloud to the rest of the class.

Tape the flipchart sheets with the expectations to the wall where everyone will be able to read them.

3

Course Purpose

To train the participant in the techniques and methods necessary for searching, locating, stabilising, and extricating victims trapped in collapsed structures, using the safest and most appropriate procedures for the rescuer as well as the victim.

3.1 Performance Objectives

Upon completing the CSSR Course, you, as part of a team of 12 members, will be able to:

3.1.1 Complete the correct and necessary actions upon arriving at the scene and before initiating a search.

3.1.2 Apply the learned search techniques to a simulated victim.

3.1.3 Gain access to a selected void space to locate two simulated victims, using four basic techniques (rubble removal, shoring, penetration and lifting).

3.1.4 Correctly assess, stabilise and extricate a simulated patient.

To accomplish the above objectives, each group will work through three consecutive simulated scenarios in the Final Practical Examination. Each group will be assigned a full complement of tools and equipment for a CSSR team. All groups must complete all three scenarios within 9 hours or less, using the techniques and procedures taught in this course.

Instructor Activity► **PPT 1-8**

Ask a participant to read the course purpose. The course purpose is the intention of the course.

Ensure that the course purpose is clear to everyone. Allow time for questions.

► **FC 1-1**

Ask participants to read aloud the performance objectives.

Ensure that the performance objectives are clear to everyone. Allow time for questions.

Remind them that the purpose is the intention of the course.

On the other hand, the performance objectives are what they are expected to be able to do at the end of the course.

► **FC 1-2**

Emphasize the importance of studying the materials for them to satisfy the performance objectives.

3

Course Purpose (Cont.)

3.2 Instructional Objectives

Upon completing the CSSR Course, you will be able to:

3.2.1 Describe how to organize and start a CSSR operation.

3.2.2 Describe the procedure to classify a collapsed structure and the building marking system.

3.3.3 List the safety precautions that must be followed in a CSSR operation.

3.3.4 Describe the methods for locating void spaces and the steps for locating possible victims.

3.3.5 Name and describe the use and maintenance of the tools, equipment and accessories used in a CSSR operation.

3.3.6 List and describe the basic techniques for penetrating a collapsed structure and gaining access to the patient.

3.3.7 Describe pre-hospital treatment for one or more trapped patients in a collapsed structure.

Each lesson will introduce its own corresponding training objectives.

Instructor Activity

▶ Ask the participants to read the instructional objectives aloud from the workbook.

Explain that the instructional objectives reflect the knowledge and theory the participants will have to learn in order to be able to complete the performance objective.

Ensure that the instructional objectives are clear to everyone.

Allow for questions, suggestions and comments.

4

Course Materials**4.1 Participant Workbook (WB)**

- The Participant Workbook is your own personal property and you need to keep it safe. Write your name in magic marker on the cover sheet in the box.
- We have ample space for you to take notes in order to reinforce the material you are learning. All the material you will be tested on will be drawn directly from the workbook, including some of the spaces you fill in.
- Check your workbook to make sure it is complete and that no pages are missing.

4.2 Reference Material (RM)

- Generally, each lesson has its own reference material, which you should study in order to complement the lecture.
- You will also receive a glossary and bibliographic references as part of the reference material.

4.3 Pre-Work

- The Pre-Work, which you should have received and completed before coming to this course, serves to establish a common level of knowledge among all participants. It is intended to make you familiar with all the basic concepts, tools and materials that will be used throughout the course.

4.4 Handouts

- You will be receiving handouts occasionally from your instructors for exercises, assignments, etc.

Instructor Activity

► PPT 1-9

Ask the class to open their WB.

Stress the importance of the WB, and that it becomes their personal property. It will only be useful to them if they complete their workbooks and take notes.

Ask everyone to write their names in the space provided on the cover. If applicable ask them to insert the divider tabs into their WB binders.

Review the contents of the workbook together with the participants, from front to back, to make sure no one is missing any pages.

► Discuss the importance of the RM and that most lessons in the course will have RM.

They must study it thoroughly in order to complement the classroom sessions.

Participants will also receive a glossary.

► Discuss purpose of PW to create knowledge base common to all participants.

Collect the pre-work.

► Some lessons may have handouts, but not all.

5

Participant Equipment

You should have brought with you to the course a set of personal protective equipment and other work equipment and materials, as indicated:

Required Equipment

- Hardhat (industrial or fire-fighter)
- Eye protection/safety goggles
- Ear protection
- Dust mask
- Gas mask
- Safety steel-toe boots
- Safety whistle
- Work gloves, leather
- Work clothes (Long sleeve shirt)
- Canteen or water bottle, minimum 1-litre capacity
- Waterproof flashlight (mounted or hand-held with spare batteries)

Optional

- Overalls or jump suit
- Sunscreen lotion
- Insect repellent
- Raincoat or poncho
- Knee pads
- Cap or hat

Other Required Materials

- Two passport-sized pictures(for the Class Directory)
- Work uniform or formal clothes for the opening and closing ceremonies

Instructor Activity

► Verify that each participant has brought to the course the PPE and other supplies required for participation in the course. Coordinator may ask the participants to bring out PPE one by one mentioning that standards

For PPE have to be followed. Participants may be sent home if PPE will not meet the minimum requirements. Emphasize the importance of having extra shirt during sessions with practical exercises.

6

Course Methodology

The course methodology is highly participatory and allows constant interaction and feedback between the instructors and participants. You will be required to gain some background knowledge as well as acquire manual skills. Objectives are clearly stated at the beginning of each lesson.

► Discuss interactive/TFI methodology.

7

Evaluation Method

You will be evaluated in this course using three methods:

7.1 Lesson Post-Tests: You will take a written post-test (self-test) every evening on the lesson(s) that you took that day. Questions may be in the form of short answer, multiple choice, true/false, fill-in-the-blank or matching. You may also be asked to draw or complete a graphic or sign. These post-tests will be reviewed the next morning.

7.2 Practical Evaluations, which will be given in lessons with a performance component. Duration will depend on complexity and number of tasks. A final practical evaluation will be given after lesson 12.

7.3 Final Written Evaluation: which will be given before your final practical exercise, covering all lessons.

Scoring System

- **Lesson Post-Tests:** All lessons except 1, 12 and 13 will have a post-test. All post-tests must be passed with a score of 70 percent in order to complete the course.

- **Final Written Evaluation:** There will be a final written evaluation covering all lessons, except 1, 12 and 13, with a minimum passing score of 70 percent in order to complete the course. This will weigh 50 percent of the overall written evaluations (post-tests).

Instructor Activity

► Emphasize the importance of filling the workbook correctly and studying the reference material in order to complete the evaluations successfully.

Instructor will facilitate the number coding of participants, explaining its purpose.

Participants will take home the post-test, to be reviewed by the instructors the next day and will be collected.

7**Evaluation Method (Cont.)**

- **Practical Evaluations:** Lessons with a performance component will have a practical evaluation afterwards. Practical evaluations are scored as Pass or No-Pass, based on your performance of tasks and attention to safety. If you receive a No-Pass score on a Practical Evaluation, you will be allowed to take one make-up per Practical Evaluation.

Instructor Activity

- ▶ Use the Evaluation Chart to explain how and when the participants will be evaluated.
- ▶ **FC 1-3**

See the CSSR Evaluation Chart

CSSR EVALUATION CHART

Lesson Number	Lesson Post-Tests These will be scored. Minimum 70 percent.	Practical Evaluations. All must receive passing score to complete course.
1	Course Introduction	
2	Organising and Starting a CSSR Operation	
3	Structures, Materials and Damage Types	
4	Structural Triage and the INSARAG Building Marking System	
5	Operational Safety	
6	Search and Location Techniques	Search and Location Techniques – Two Stations
7	Tools, Equipment and Accessories	Using Tools, Equipment and Accessories – Four Stations
8	Rescue Techniques	Breaking and Breaching Materials – Four Stations
9	Shoring Techniques	Building Shores – Four Stations
10	Lifting and Stabilising Loads	Cribbing, Using the Come-Along and Hydraulic Jack – Four Stations
11	Pre-Hospital Treatment	Patient Assessment, Packaging and Extricating Victims
12	Course Review and Final Written Evaluation	
13		FINAL PRACTICAL EXERCISE

7

Evaluation Method (Cont.)

- **Non-Passing Scores:** If you are unable to obtain a passing score on a Post-Test, you will be allowed one make up test the following day; whereas if you are unable to obtain a passing grade for a Practical Evaluation, you will not be eligible to participate in the Final Practical Evaluation. In such case, you may continue to participate in the remainder of the course at your choosing. Should you choose to continue participating, you will receive a Fail Certificate for the course, after completing all lessons.

The **FINAL PRACTICAL EVALUATION** consists of a simulated CSSR incident. This is a pass or fail evaluation **only**. There will be no make-up for the Final Practical. It is divided into three phases for a total duration of nine (9) hours. You can find a more complete description in Lesson 13.

After successfully completing all course requirements, you will receive a **Certificate of Completion**. This Certificate will state that you have successfully achieved all lesson objectives and completed all tests, practices and evaluation criteria.

8

Course Schedule and Attendance

The rules for attendance and participation are as follows:

- Participation in all classes and course activities is mandatory.
- Punctuality – promotes mutual respect and responsibility among participants.

Absences and tardiness: Tardiness and missing classes is not acceptable. Only under very special circumstances will an exception be made for one late arrival. If more than 5% of total period will be absent from the class by the participants then he/she will be returned to his unit/ organization (RTU). Missing a class or arriving late for no special reason will disqualify you from passing the course.

Instructor Activity

- ▶ It is obligatory to attend all activities (lessons, exercises and evaluations).

Tardiness will not be accepted. Under special circumstances an exception be made, but not for more than 15 minutes late. Violation of this rule will result in the participant losing the lesson and being barred from passing the course.

- ▶ Instruct participants to open the Course Schedule in their workbook binders.

Inform the class that the schedule will be posted in several locations throughout the facilities so that everyone can stay easily informed of the schedule. This will make it easier for them as well as course personnel to be punctual.

8

Course Schedule and Attendance (Cont.)

Participant in all course activities (lectures, practical exercises, and evaluations) is MANDATORY.

Only in the case of **real emergencies** will interruptions to the course be permitted. Telephone calls will be handled by administrative personnel, who will take messages for all course participants.

Instructor Activity

The Course Coordinator may make changes to the schedule as needed and these will be posted as they are made.

9

Participant Feedback

Daily feedback for individual lessons: At the end of each day's classes, there will also be a short, verbal feedback session to capture the strengths of the course and those aspects needing improvement. We will also ask you to fill out the **Lesson Evaluation Form** at the end of each lesson.

Overall course feedback. Once you have completed all lessons and the Final Practical Evaluation, we will ask you to please complete the overall course feedback. We highly value your comments, as they will greatly assist us in improving the course for the future.

► Stress the importance of filling out the Lesson Evaluation Form after each lesson. They must turn one in before leaving the room when the lesson is finished. See form at the end of the lesson in workbook. This allows them to complete these forms while the ideas and details are still fresh in their memory. Otherwise the evaluation forms will lose their validity.

Review the Lesson Evaluation Form and answer any questions.

10

Required Forms

If you have not already done so, please make sure you have completed and turned in the following CSSR Course forms, which contain the health, dietary and liability release.

Instructor Activity

► If they have not already done so, all forms must be turned in by the end of Lesson 1. Copies of the forms can be found at the end of Lesson 1 in the workbook.

Emphasize that every individual is responsible for his or her own safety and that they will be exposing themselves to a certain level of risk during the course.

11

Facilities and Ground Rules**Classroom Etiquette**

- Smoking is prohibited inside any building; you will be able to smoke outside during breaks.

PPT 1-10

This topic will be discussed by the Course Coordinator. It is recommended to prepare, beforehand, a welcome sheet with instructions and details for the participants.

Meal

Housing and Expenses

- Covered expenses

- Uncovered expenses

11

Facilities and Ground Rules (Cont.)

Travel

- Reservations, confirmations, itineraries, changes, should be directed to administrative staff.

Safety

- Take note of emergency procedures, classroom evacuation, emergency exits:

- Location of safety areas in the facilities, meeting points, etc:

- Location of the first aid kit and its contents:

- Emergency phone numbers, other:

Instructor Activity

► PPT 1-11

12

The “File”

We will post a blank flipchart labelled “File” on one of the walls. We will use it to record questions and issues that will need to be clarified in later lessons or in the general review at the end of the course. You can also write down your questions here for future reference:

► Tape a blank flipchart sheet labelled “File” on the wall, which will serve to write down questions and issues that need to be studied or will be covered in later lessons.

Instructor Activity

► REQUIRED FORMS

Copies of the course forms must be ready and available for participants who have not yet turned them in.

► CLOSING

- Emphasize that there are no surprises in this course— every activity is based on the stated lesson objectives.
- All instructors and course personnel are here to help the participants.
- Allow for any questions, explanations and/or comments.
- Ask them to fill out a Lesson Evaluation Form at this time.
- Thank everyone for their participation. Facilitate the pre-test. Once completed, introduce the next lesson and the instructor in charge.

LESSON 1

— PPT's

1-1



1-2

OBJECTIVES

Upon completing this lesson, you will become familiar with:

1

Names and background information of the course coordinator, instructors, assistants, support staff and the other participants.

PPT 1-2

1-3

OBJECTIVES

Upon completing this lesson, you will become familiar with:

2

The following aspects of the course will be covered in this lesson:

- Excerpts
- Purpose
- Objectives
- Methodology
- Testing
- Materials
- Logistics and Agenda
- Course overview and its relation to the OFDA First Responder Program.

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1-4

PEER NETWORKING STRATEGIES

1. PEER Webpage



<http://www.merit.org.np/meritpeer>

PPT 1-4

1-5

PEER NETWORKING STRATEGIES

2. Discussion Forum



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1-6

PEER NETWORKING STRATEGIES

3. PEER database



PPT 1-6

LESSON 1

— PPT's

1-7

PEER NETWORKING STRATEGIES

4. PEER Mail Group

- ▶ MFR Instructors
mfri_peer@nset.org.np

- ▶ CSSR Instructors
cssri_peer@nset.org.np

- ▶ HOPE Instructors
hopei_peer@nset.org.np

There are also mail groups for partner agencies, nodal agencies, In-Country Consultants, and designated institutions.

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1-8

PURPOSE OF THE COURSE

To train the participant in the techniques and methods necessary for searching, locating, stabilising, and extricating victims trapped in collapsed structures, using the safest and most appropriate procedures for the rescuer as well as the victim.

PPT 1-8

PPT 1-7

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1-9

COURSE MATERIALS

- ▶ PWB
Participant Workbook

- ▶ RM
Reference Material

- ▶ PW
Pre-Work

- ▶ HO
Handouts

FACILITIES AND GROUND RULES

- ▶ Classroom
Etiquette

- ▶ Meals

- ▶ Housing and
Expenses

- ▶ Travel

- ▶ Safety

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PPT 1-9

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PPT 1-10

1-11

SAFETY RULE

Safety is of utmost concern in the CSSR course.
Participants will be given two warnings only with the third as ground for expulsion.

PPT 1-11

LESSON 1

— FLIP CHARTS

FC1-1

FC1-2



PERFORMANCE OBJECTIVES

1

Complete the correct and necessary actions upon arriving at the scene and before initiating a search.

2

Apply the learned search techniques to a simulated victim.

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More >
FC 1-1



« continued

PERFORMANCE OBJECTIVES

3

Gain access to selected void space to locate two simulated victims, using four basic techniques (rubble removal, shoring, penetration and lifting).

4

Correctly assess, stabilise and extricate a simulated patient.

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FC 1-2

FC1-3



CSSR EVALUATION CHART

Lesson Number	Lesson Post-Tests These will be scored. Minimum 70 percent.	Practical Evaluations All must receive passing score to complete course.
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11	Pre-Hospital Treatment	Patient Assessment, Packaging and Extricating Victims
12	Course Review and Final Written Evaluation	
13		FINAL PRACTICAL EXERCISE

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FC 1-3

COLLAPSED STRUCTURE SEARCH AND RESCUE (CSSR)

LESSON 2 — OVERVIEW

Organising and Starting a CSSR Operation

Duration	Lecture :- 03 Periods
Main Points	<ul style="list-style-type: none"> • Definition of a CSSR operation • Definition and structure of a CSSR Squad • Phases of a CSSR operation • Two stage of the operation phase of a CSSR operation • Steps in the initial assessment stage during a CSSR operation • Incident Command System • Scope of operation
Suggested Preparation	<ul style="list-style-type: none"> • Based on the Lesson Objectives, highlight the reference material on related subjects. • Check the participant's manual and fill in the blanks to guide you in helping participants with needed information. • Remember that the participants should have read the definitions for CSSR operation and CSSR Squad. Use this as a starting point. • Use examples of prior CSSR operations to explain the concepts. • Read and complete the written test so that you will be able to review and discuss it with the participants the following day.
Evaluation System	Written test the following day
Materials and Resources Needed	<ul style="list-style-type: none"> • Presentation slides (6) • Flipchart (5) • Flipchart board • Flipchart pad • Markers of various colours • Projector • Screen • Test sheet • Post-Test
Importance of This Lesson	<ul style="list-style-type: none"> • To familiarize the participants with the organisation and concepts of a CSSR operation with its many different components and phases

