

## Qualification Pack



# Introduction to Textile Reinforced Concrete

QP Code: TIOCES/MCr-0001

Version: 1.0

NSQF Level: 3

THE INSTITUTION OF CIVIL ENGINEERS SOCIETY || 533-R  
Model Town Ludhiana || email:cmswami@ice.net.in

## Qualification Pack

## Contents

|  |    |
|--|----|
| TIOCES/MCr-0001: Introduction to Textile Reinforced Concrete ..... | 3  |
| <i>Brief Job Description</i> .....                                 | 3  |
| Applicable National Occupational Standards (NOS) .....             | 3  |
| <i>Compulsory NOS</i> .....  | 3  |
| <i>Qualification Pack (QP) Parameters</i> .....                    | 3  |
| TIOCES/MCr-0001: Introduction to Textile Reinforced Concrete ..... | 5  |
| Assessment Guidelines and Weightage .....                          | 7  |
| <i>Assessment Guidelines</i> .....                                 | 7  |
| <i>Assessment Weightage</i> .....                                  | 8  |
| Acronyms .....   | 9  |
| Glossary .....   | 10 |

## Qualification Pack

### TIOCES/MCr-0001: Introduction to Textile Reinforced Concrete

#### Brief Job Description

This course on Textile Reinforced Concrete (TRC) equips participants with essential skills to prepare TRC elements using lightweight, durable, and versatile textile materials. It covers the fundamentals of textile types, concrete compatibility, and reinforcement techniques. Participants will gain hands-on experience in handling textiles, applying layers, and ensuring quality control. The course also explores advancements in TRC technology and its applications in modern construction, enabling participants to fabricate and apply TRC effectively in construction scenarios.

#### Personal Attributes

undefined

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [TIOCES/MCr-0001: Introduction to Textile Reinforced Concrete](#)

#### Qualification Pack (QP) Parameters

|                                      |              |
|--------------------------------------|--------------|
| <b>Sector</b>                        | Construction |
| <b>Sub-Sector</b>                    |              |
| <b>Occupation</b>                    |              |
| <b>Country</b>                       |              |
| <b>NSQF Level</b>                    | 3            |
| <b>Credits</b>                       | 1            |
| <b>Aligned to NCO/ISCO/ISIC Code</b> |              |

## Qualification Pack

|   |   |
|---|---|
| <b>Minimum Educational Qualification &amp; Experience</b> | 10th Class (completed)<br>OR<br>10th grade pass and pursuing continuous schooling<br>OR<br>Previous relevant Qualification of NSQF Level 2 with 3 Years of experience<br>OR<br>Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience |
| <b>Minimum Level of Education for Training in School</b>  |   |
| <b>Pre-Requisite License or Training</b>                  | NA  |
| <b>Minimum Job Entry Age</b>                              | 16 Years  |
| <b>Last Reviewed On</b>                                   | NA  |
| <b>Next Review Date</b>                                   | 18/02/2030  |
| <b>NSQC Approval Date</b>                                 | 31/03/2025  |
| <b>Version</b>  | 1.0   |
| <b>Reference code on NQR</b>                              | NM-03-CO-03845-2025-V1-TICE TRC   |
| <b>NQR Version</b>  | 1   |



## Qualification Pack

### TIOCES/MCr-0001: Introduction to Textile Reinforced Concrete

#### Description

This course on Textile Reinforced Concrete (TRC) equips participants with essential skills to prepare TRC elements using lightweight, durable, and versatile textile materials. It covers the fundamentals of textile types, concrete compatibility, and reinforcement techniques. Participants will gain hands-on experience in handling textiles, applying layers, and ensuring quality control. The course also explores advancements in TRC technology and its applications in modern construction, enabling participants to fabricate and apply TRC effectively in construction scenarios.

#### Elements and Performance Criteria



## Qualification Pack

### Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|----------------------------------|--------------|-----------------|---------------|------------|
| NOS Total                        | 30           | 50              | -             | 20         |

## Qualification Pack

### National Occupational Standards (NOS) Parameters

|                            |   |
|----------------------------|---|
| <b>NOS Code</b>            | TIOCES/MCr-0001                             |
| <b>NOS Name</b>            | Introduction to Textile Reinforced Concrete |
| <b>Sector</b>              | Construction                                |
| <b>Sub-Sector</b>          |   |
| <b>Occupation</b>          |   |
| <b>NSQF Level</b>          | 3   |
| <b>Credits</b>             | 1   |
| <b>Version</b>             | 1.0   |
| <b>Last Reviewed Date</b>  | 18/02/2025                                  |
| <b>Next Review Date</b>    | 18/02/2028                                  |
| <b>NSQC Clearance Date</b> | 18/02/2025                                  |

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

- 1.Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

**Minimum Aggregate Passing % at QP Level : 50**



## Qualification Pack

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## Assessment Weightage

Compulsory NOS

| National Occupational Standards                             | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage  |
|---|--------------|-----------------|---------------|------------|-------------|------------|
| TIOCES/MCr-0001.Introduction to Textile Reinforced Concrete | 30           | 50              | -             | 20         | 100         | 100        |
| <b>Total</b>  | <b>30</b>    | <b>50</b>       | <b>-</b>      | <b>20</b>  | <b>100</b>  | <b>100</b> |



## Qualification Pack

### Acronyms

|             |   |
|-------------|---|
| <b>NOS</b>  | National Occupational Standard(s)               |
| <b>NSQF</b> | National Skills Qualifications Framework        |
| <b>QP</b>   | Qualifications Pack                             |
| <b>TVET</b> | Technical and Vocational Education and Training |

## Qualification Pack

### Glossary

|  |  |
|--|--|
| <b>Sector</b>                                | Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.  |
| <b>Sub-sector</b>                            | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.   |
| <b>Occupation</b>                            | Occupation is a set of job roles, which perform similar/ related set of functions in an industry.  |
| <b>Job role</b>                              | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.  |
| <b>Occupational Standards (OS)</b>           | OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| <b>Performance Criteria (PC)</b>             | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.  |
| <b>National Occupational Standards (NOS)</b> | NOS are occupational standards which apply uniquely in the Indian context.   |
| <b>Qualifications Pack (QP)</b>              | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.   |
| <b>Unit Code</b>                             | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'  |
| <b>Unit Title</b>                            | Unit title gives a clear overall statement about what the incumbent should be able to do.  |
| <b>Description</b>                           | Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.   |
| <b>Scope</b>                                 | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.  |

## Qualification Pack

|   |  |
|---|--|
| <b>Knowledge and Understanding (KU)</b> | Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.   |
| <b>Organisational Context</b>           | Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.   |
| <b>Technical Knowledge</b>              | Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.   |
| <b>Core Skills/ Generic Skills (GS)</b> | Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles. |
| <b>Electives</b>                        | Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.  |
| <b>Options</b>                          | Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.  |