Chemist – Production (Pharma, Cosmetics & Biologics) Electives: 1. API / Excipient Manufacturing, 2. Sterile Product Manufacturing, 3. Non-Sterile Product Manufacturing, 4. AYUSH Drug Manufacturing, 5. Sanitary and Personal Hygiene Product Manufacturing, Options: 1. Regulated Business Operations

QUALIFICATION FILE

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☒ Apprenticeship

☒ Upskilling ☒ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☒General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

Life Sciences Sector Skill Development Council

14, Palam Marg, Rear 2nd Floor, Vasant Vihar, New Delhi, PIN 110057

Phone: +91 11 41042407/ 408, E-mail: info@lsssdc.in

Table of Contents

Section 1: Basic Details

1.	**Qualification Name**	Chemist – Production (Pharma, Cosmetics & Biologics) Electives: 1. API / Excipient Manufacturing 2. Sterile Product Manufacturing 3. Non-Sterile Product Manufacturing 4. AYUSH Drug Manufacturing 5. Sanitary and Personal Hygiene Product Manufacturing Min. One Elective is MUST Maximum 2 Electives can be taken Options: 1.Regulated Business Operations	
2.	**Sector/s**	Life Sciences	
3.	**Type of Qualification: ☐ New ☒ Revised ☒ Has Electives/Options** **☐OEM**	**NQR Code & version of existing/previous qualification:** QM-05-LS-00255-2023-V1.1-LSSSDC	**Qualification Name of existing/previous version:** Chemist- Production (Pharma, Cosmetics & Biologics)
4.	**a. OEM Name** **b. Qualification Name** (*Wherever applicable)*	NA	
5.	**National Qualification Register (NQR) Code &Version** (*Will be issued after NSQC approval)*	**QG-05-LS-00255-2025-V2-LSSSDC**	**6. NCrF/NSQF Level:** 5
7.	**Award (Certificate/Diploma/Advance Diploma/ Any Other** *(Wherever applicable specify multiple entry/exits also & provide details in annexure)*	Certificate	
8.	**Brief Description of the Qualification**	Chemist – Production (Pharma, Cosmetics & Biologics) is responsible for monitoring the production processes and maintaining the compliance with regulatory standards. The job role holder carryout the reporting and documentation for regulatory compliance and responsible for maintaining the strict compliance to EHS and cGMP guidelines.	
9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	**a. Entry Qualification & Relevant Experience:**	

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1	3 year Diploma in Engineering (after 10th) in Mechanical/ Mechatronics/ Electronics/ Chemical Engineering	1.5 years of experience in production
2	UG Diploma (with Chemistry Subject)	
3	Completed 2nd year of B.E./ B.Tech. Chemical Engineering / Biotechnology	
4	Completed 2nd year of B. Pharma	
5	NSQF Level 4 Qualification for Production Machine Operator- Non-Sterile Formulations	3 years of experience in production of relevant product
6	NSQF Level 4 Qualification for Production Equipment Operator- Active Pharmaceutical Ingredient (API)/ Bulk Drug	3 years of experience in production of relevant product
7	NSQF Level 4.5 Qualification for Production Equipment Operator- Sterile Formulation	1.5 years of experience in production of relevant product

b. Age: 19 years

10.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	20	**11. Common Cost Norm Category (I/II/III)** *(wherever applicable)*: **I**
12.	**Any Licensing requirements for Undertaking Training on This Qualification** *(wherever applicable)*	NA	
13.	**Training Duration by Modes of Training Delivery** *(Specify **Total Duration** as per selected training delivery modes and as per requirement of the qualification)*	☒ **Offline** ☐**Online** ☒ **Blended**	

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Offline Mode					
Classroom	210:00	390 :00	00:00	00:00	600:00
OR					

		Blended Mode	210:00	390 :00	00:00	00:00	600:00
		Offline (As part of blended mode)	105:00	390 :00	00:00	00:00	
		Online (As part of blended mode)	105:00	00:00	00:00	00:00	
		(Refer Blended Learning Annexure for details)					
14.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	*NCO-2015/2262.0101* *Pharma-Manufacturing*					
15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	Vertical progression 1. Specialist- Quality Assurance (Pharma, Biological Products and Medical Devices) (Level 5.5)					
16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	Hindi and English					
17.	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	**☐ Yes ☒ No URLs of similar Qualifications:**					
18.	**Is the Job Role Amenable to Persons with Disability**	**☐ Yes ☒ No** **If "Yes", specify the applicable type of Disability:**					
19.	**How Participation of Women will be Encouraged**	Policy measures are needed to promote the inclusion of educated and working women, especially in science and technology fields, where only 14% of women are hired among micro, small, and medium enterprises despite comprising 43% of Science and technology graduates. The conscious efforts are made by LSSSDC to sensitize organizations and hiring manager for bring Women employees on board by LSSSDC through Industry Associations and Large MNCs on governing Board and have received positive responses and assurance from most of employers in life sciences sector to bring Min. 30% share of Women employees and apprentices in the given occupation and job role. LSSSDC shall also be driving a Diversity and Inclusivity Program with Indian Pharmaceutical Alliance for catalyzing the efforts.					
20.	**Are Greening/ Environment Sustainability Aspects Covered** *(Specify the NOS/Module which covers it)*	**☒ Yes ☐ No**					
21.	**Is Qualification Suitable to be Offered in Schools/Colleges**	**Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No**					
22.	**Name and Contact Details of Submitting / Awarding Body SPOC** *(In the case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name: Mrs. Shivi Chaudhary** **Email: shivi.chaudhary@lsssdc.in** **Contact No.: + 91 11 41042407/ 408, +91 9315747189** **Website: https://www.lsssdc.in/**					
23.	**Final Approval Date by NSQC:** 8th April 2025	**24. Validity Duration: 3 years**			**25. Next Review Date:** 8th April 2028		

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at the NOS/ Module level. For further details refer curriculum document.

***Th.**-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project*

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1.	**Compulsory NOS** Discuss about Life Sciences Industry and Basics of manufacturing Operations	LFS/N0274, v1	Core	Level-4	1	15	15	-	-	30	40	30	15	15	100	10%
2.	**Compulsory NOS** Monitor the production process in compliance with cGMP and other regulatory guidelines	LFS/N1219, V3.0	Core	Level-5	3	30	60	-	-	90	30	50	12	8	100	15%
3.	**Compulsory NOS** Ensure adherence to Environment, health and safety guidelines in production facility and cGMP controlled areas	LFS/N0111, v3.0	Non-Core	Level-5	1	15	15	-	-	30	30	55	0	15	100	10%
4.	**Compulsory NOS** Coordinate with Manager, team-members, cross-functional teams and auditors	LFS/N0117, v3.0	Non-Core	Level-5	1	15	15	-	-	30	30	50	12	8	100	10%

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
5.	**Compulsory NOS** Perform reporting and documentation for regulatory compliance	LFS/N1220, v3.0	Core	Level-5	1	15	15	-	-	30	30	45	13	12	100	15%
6.	**Compulsory NOS** Employability Skills (60 Hours)	DGT/VSQ/N0102, v1	Core	Level- 4	2	30	30			60	20	30	-	-	50	10%
Duration (in Hours) / Total Marks					9	120	150	-	-	270	180	260	52	58	550	70%

Elective NOS/s 1: API / Excipient Manufacturing

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1.	Manage API / excipient manufacturing process in compliance with cGMP and other regulatory guidelines	LFS/N1221 , v3.0	Core	Level-5	11	90	240	-	-	330	25	45	20	10	100	30%
Duration (in Hours) / Total Marks					11	90	240	-	-	330	25	45	20	10	100	30%

Elective NOS/s 2: Sterile Product Manufacturing

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1.	Manage sterile product manufacturing process in compliance with cGMP and other regulatory guidelines	LFS/N1222, v3.0	Core	Level-5	11	90	240	-	-	330	25	45	20	10	100	30%
Duration (in Hours) / Total Marks					11	90	240	-	-	330	25	45	20	10	100	30%

Elective NOS/s 3: Non-Sterile Product Manufacturing

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1	Manage non-sterile product manufacturing process in compliance with cGMP and other regulatory guidelines	LFS/N1216, v3.0	Core	Level-5	11	90	240	-	-	330	25	50	15	10	100	30%
Duration (in Hours) / Total Marks					11	90	240	-	-	330	25	50	15	10	100	30%

Elective NOS/s 4: AYUSH drug Manufacturing

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1	Manage AYUSH drug manufacturing process and maintain compliance with cGMP and other regulatory guidelines	LFS/N1217, v3.0	Core	Level-5	11	90	240	-	-	330	25	45	20	10	100	30%
Duration (in Hours) / Total Marks					11	90	240	-	-	330	25	45	20	10	100	30%

Elective NOS/s 5: Sanitary and Personal Hygiene Product Manufacturing

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1	Manage Sanitary and Personal Hygiene Product manufacturing process in compliance with cGMP and other regulatory guidelines	LFS/N1218, v3.0	Core	Level-5	11	90	240	-	-	330	25	45	20	10	100	30%
Duration (in Hours) / Total Marks					11	90	240	-	-	330	25	45	20	10	100	30%

Option NOS/s 1: Regulated Business Operations

The table lists the modules and their duration corresponding to the Elective NOS of the QP

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1	Establish own enterprise and perform various entrepreneurial activities to run the business operations in Life Sciences Sector	LFS/N0120, v3.0	Core	Level-6	1	15	15	-	-	30	30	50	12	8	100	15%
2	Maintain the critical business documents as Entrepreneur in Life Sciences Sector	LFS/N0121, v3.0	Core	Level-6	1	15	15	-	-	30	20	55	15	10	100	15%
Duration (in Hours) / Total Marks					2	30	30	-	-	60	50	105	27	18	200	30%

Assessment - Minimum Qualifying Percentage

*Please specify **any one** of the following:*

Minimum Pass Percentage – Aggregate at qualification level: **70 %** *(Every Trainee should score a specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

Minimum Pass Percentage – NOS/Module-wise: **70 %** *(Every Trainee should score a specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)*

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Graduate in B.Sc (with chemistry subject)/ B.Pharma/ B.E/B.tech (chemical engineering)with 6 years relevant industry experience with specialization in Chemist Production (Pharma, Cosmetics & Biologics) and 2 years experience of Training/ Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. OR Post graduate in MSc (with chemistry subject)/ M.Pharma/ M.E/ M.tech (chemical engineering) with 4 years relevant industry experience with specialization in Chemist Production(Pharma, Cosmetics, & Biologics) and 2 years experience of Training / Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment.

		Certified for Job Role: "Chemist - Production (Pharma, Cosmetics & Biologics)" in any one Elective from API/ Excipient Manufacturing /Non Sterile Product/ Sterile Product/Sanitary & Personal Hygiene Product: "LFS/Q1201, v4.0" with minimum accepted score of 80%. Recommended that the Trainer is certified for the Job Role: "Trainer(VET and Skills)", mapped to the Qualification Pack: "MEP/2601, v3.0" with minimum score of 80%.
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Graduate in B.Sc (with chemistry subject)/ B.Pharma/ B.E/B.tech (chemical engineering)with 10 years relevant industry experience with specialization in Chemist Production (Pharma, Cosmetics & Biologics) and 5 years experience of Training/ Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. OR Post graduate in MSc (with chemistry subject)/ M.Pharma/ M.E/ M.tech (chemical engineering) with 6 years relevant industry experience with specialization in Chemist Production(Pharma, Cosmetics, & Biologics) and 4 years experience of Training / Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. Certified for Job Role: "Chemist - Production (Pharma, Cosmetics & Biologics)" in any one Elective from API/ Excipient Manufacturing /Non Sterile Product/ Sterile Product/Sanitary & Personal Hygiene Product: "LFS/Q1201, v4.0" with minimum accepted score of 80%. Recommended that the Trainer is certified for the Job Role: "Trainer(VET and Skills)", mapped to the Qualification Pack: "MEP/2602, v3.0" with minimum score of 80%.
3.	**Tools and Equipment Required for Training**	☐Yes ☐No (*If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	Upskilling of the trainer required

Section 4: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Graduate in B.Sc (with chemistry subject)/ B.Pharma/ B.E/B.tech (chemical engineering)with 6 years relevant industry experience with specialization in Chemist Production (Pharma, Cosmetics & Biologics) and 2 year experience of Training/ Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. OR Post graduate in MSc (with chemistry subject)/ M.Pharma/ M.E/ M.tech (chemical engineering) with 4 years relevant industry experience with specialization in Chemist Production(Pharma, Cosmetics, & Biologics)and 2 year experience of Training / Assessment with specialization on the Assessment/ Training Experience/ Vocational Assessment/ Academic Assessment.

		Certified for Job Role: "Chemist - Production (Pharma, Cosmetics & Biologics)" in any one Elective from API/ Excipient Manufacturing /Non Sterile Product/ Sterile Product/Sanitary & Personal Hygiene Product: "LFS/Q1201, v4.0" with minimum accepted score of 80%. Recommended that the Assessor is certified for the Job Role: "Assessor(VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701, v3.0" with minimum score of 80%.
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Graduate in B.Sc (with chemistry subject)/ B.Pharma/ B.E/B.tech (chemical engineering)with 6 years relevant industry experience with specialization in Chemist Production (Pharma, Cosmetics & Biologics) and 2 year experience of Training/ Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. OR Post graduate in MSc (with chemistry subject)/ M.Pharma/ M.E/ M.tech (chemical engineering) with 4 years relevant industry experience with specialization in Chemist Production(Pharma, Cosmetics, & Biologics)and 2 year experience of Training / Assessment with specialization on the Assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. Certified for Job Role: "Chemist - Production (Pharma, Cosmetics & Biologics)" in any one Elective from API/ Excipient Manufacturing /Non Sterile Product/ Sterile Product/Sanitary & Personal Hygiene Product: "LFS/Q1201, v4.0" with minimum accepted score of 80%.
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Graduate in B.Sc (with chemistry subject)/ B.Pharma/ B.E/B.tech (chemical engineering)with 10 years relevant industry experience with specialization in Chemist Production (Pharma, Cosmetics & Biologics) and 5 year experience of Training/ Assessment with specialization on the Job assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. OR Post graduate in MSc (with chemistry subject)/ M.Pharma/ M.E/ M.tech (chemical engineering) with 8 years relevant industry experience with specialization in Chemist Production(Pharma, Cosmetics, & Biologics)and 4 year experience of Training / Assessment with specialization on the Assessment/ Training Experience/ Vocational Assessment/ Academic Assessment. Certified for Job Role: "Chemist - Production (Pharma, Cosmetics & Biologics)" in any one Elective from API/ Excipient Manufacturing /Non Sterile Product/ Sterile Product/Sanitary & Personal Hygiene Product: "LFS/Q1201, v4.0" with minimum accepted score of 80%. Recommended that the Lead Assessor is certified for the Job Role: " Lead Assessor(VET and Skills)", mapped to the Qualification Pack: "MEP/Q2702, v3.0" with minimum score of 80%.

4.	**Assessment Mode** *(Specify the assessment mode)*	**Offline and Online**
5.	**Tools and Equipment Required for Assessment**	☒ Same as for training ☐ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)*

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	**Latest Skill Gap Study (not older than 2 years) (Yes/No):** Yes
2.	**Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):** Yes
3.	**Government /Industry initiatives/ requirement (Yes/No):** No
4.	**A number of Industry validations provided:** 12
5.	**Estimated nos. of persons to be trained and employed:** 3000
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:** *No* If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	**Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)*	Yes
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	Yes
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	Yes
4.	**Annexure:** Assessment Strategy *(Mandatory)*	Yes
5.	**Annexure:** Blended Learning *(Mandatory, in case the selected Mode of delivery is "Blended Learning")*	Yes
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case of qualification has multiple Entry-Exit)*	Yes
7.	**Annexure:** Acronym and Glossary *(Optional)*	Yes
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	Yes

9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	Yes
10.	**Supporting Document:** Occupational Map *(Mandatory)*	Yes
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	Yes
12.	**Any other document you wish to submit:**	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Process	Few of the job elements, expected to be performed by Chemist – Production (Pharma, Cosmetics & Biologics) are: • Pre-production process • Production Process • Post-production process • Environment Sustainability • Reporting • Recording and documentation • Follow health and hygiene protocols • API/ excipient Manufacturing process • GMP compliant documentation • Sterile manufacturing process • GMP compliant Documentation • Non-sterile manufacturing process • AYUSH drug manufacturing process • Sanitary and personal hygiene product manufacturing process • Set up enterprise and perform entrepreneurial activities • Maintenance of accounts and ledgers	Chemist – Production (Pharma, Cosmetics & Biologics) performs quality checks in various samples as per the SOPs followed in the Life Sciences Sector. The job holder is responsible to pre-analysis checks, laboratory investigations and analysis, routine Inspection of Instruments, identification of non-conformities, and labelling throughout the job functions. He/she is also responsible to perform continuous reporting and documentation at every step. The Chemist – Production (Pharma, Cosmetics & Biologics) is well skilled in handling instruments to perform sample analysis. All the above performance outcomes are routine and common in all the work assigned to Chemist – Production (Pharma, Cosmetics & Biologics), hence they are categorized as familiar and predictable processes where the Chemist – Production (Pharma, Cosmetics & Biologics) has a situation of clear choice.	5

Professional Knowledge	Few of the job elements, expected to be performed by Chemist – Production (Pharma, Cosmetics & Biologics) are: ● Recording and documentation ● Data Integrity ● Follow health and hygiene protocols ● Adhere to safety and security procedures ● Adhere to emergency procedures ● Coordination with Supervisor ● Coordination with team and cross-functional teams ● Respond to audit queries ● Sensitivity towards all genders and people with disability ● GMP compliant documentation ● Sterile manufacturing process ● GMP compliant Documentation ● Set up enterprise and perform entrepreneurial activities ● Maintenance of accounts and ledgers ● Comply with legal, regulatory and statutory standards ● Infrastructure related documentation ● Supply Chain related documentation ● Documentation for sales & marketing ● Quality audit and client/regulatory inspections related documentation	● Chemist – Production (Pharma, Cosmetics & Biologics) needs to have the factual knowledge of facts, principles, processes and general concepts related to Good Laboratory Practices(GLP), how to routinely perform pre-analysis checks laboratory investigations and analysis, routine Inspection of Instruments, identification of non-conformities and labelling by recalling the work safety guidelines. The job holder should also be efficient to coordinate with Manager, colleagues and auditors to meet the communication needs to fulfill work requirements of Chemist – Production (Pharma, Cosmetics & Biologics)	5
Professional Skills	Few of the job elements, expected to be performed by Chemist – Production (Pharma, Cosmetics & Biologics) are: ● Pre-production process ● Production Process ● Post-production process ● Environment Sustainability ● Reporting	To perform the tasks of Chemist – Production (Pharma, Cosmetics & Biologics) the job holder utilizes professional skills like good communication and interpersonal skills, good analytical, reasoning skills, attention to details, critical thinking, and excellent organizational skills.	5

	• Recording and documentation • Follow health and hygiene protocols • API/ excipient Manufacturing process • GMP compliant documentation • Sterile manufacturing process • GMP compliant Documentation • Non-sterile manufacturing process • AYUSH drug manufacturing process • Sanitary and personal hygiene product manufacturing process • Set up enterprise and perform entrepreneurial activities • Comply with legal, regulatory and statutory standards	For routine job activities and tasks the Chemist – Production (Pharma, Cosmetics & Biologics) uses the planning and organizing skills. The job holder demonstrates analytical and critical thinking skills while performing analysis on instruments like HPLC/GC/UV/FT-IR/Dissolution Test Apparatus analysis. The scope of utilization of all above professional skills remains limited to routine and repetitive and for a narrow range of applications	
Core Skills	Few of the job elements, expected to be performed by Chemist – Production (Pharma, Cosmetics & Biologics) are: • Coordination with Supervisor • Coordination with team and cross-functional teams • Respond to audit queries • Sensitivity towards all genders and people with disability • GMP compliant documentation • Reporting • Recording and documentation • Data Integrity • Maintenance of accounts and ledgers • Infrastructure related documentation • Supply Chain related documentation • Documentation for sales & marketing • Quality audit and client/regulatory inspections related documentation	To perform the tasks, Chemist – Production (Pharma, Cosmetics & Biologics) uses organizing information, communication and problem solving skills. For reporting and documentation proposed, he/she applies the basics of arithmetic and algebraic principles and organizational skills. For coordination related tasks and ensuring compliance to organizational SOPs and regulatory requirements, the job holder is expected to have a basic understanding of the social-political and natural environment at the place of work/ organization he/she is working for.	5
Responsibility	Few of the job elements, expected to be performed by Chemist – Production (Pharma, Cosmetics & Biologics) are:	Chemist – Production (Pharma, Cosmetics & Biologics) has responsibility for his/her work and learning and supports to Junior Manager- Pharma	5

	• Pre-production process • Production Process • Post-production process • Environment Sustainability • Reporting • Recording and documentation • Follow health and hygiene protocols • API/ excipient Manufacturing process • GMP compliant documentation • Sterile manufacturing process • Data Integrity • GMP compliant Documentation • Set up enterprise and perform entrepreneurial activities • Comply with legal, regulatory and statutory standards	Production, Supervisor Junior Chemist- – API/Chemical Manufacturing/ Packaging, .Junior Manager- Pharma Production and cross functional Teams. And in case of a scenario/situation of no clear choice, he is expected to take guidance from the Head of Quality Department.	

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Augmented Reality Manual developed by Simulanis	For Class room Instructor	1
2.	Chart of Various Valves	total 8 type of valves	1
3.	Cleanroom Gown- reusable	Unit= Pc	10
4.	Co2 Type & Abc Type Fire Extinguisher	1 each type for Demonstration	1
5.	Commercial Weighing Balance	(1.2Kg- 6.0Kg)	1
6.	Computer/ Laptop		15
7.	Face Mask (Half & Full Face)	1 each type	1
8.	Gloves	Unit= Box; 1 box of each type (Nitrile, Heat/Chemical/Acid Resistent)	1
9.	HDMI Cable for TV	10 Mtr.	3
10.	Helmets	safety helmets	10
11.	Internet Connection	8 MBPS Minimum	1
12.	LAN Cable	For Connecting Computers with LAN in Hybrid Class Room/ IT Lab, exempted in case of a WIFI connection	11
13.	LED SMART TV 40 inch	Any make for VR lab	1
14.	License for PC Gaming Modules Developed by Simulanis	For Hybrid lab	1
15.	License for PharmaVR Software by Simulanis	For Virtual Reality lab	1
16.	Micrometer Screw Gauge		1
17.	Mini HDMI Cable	For Connecting Tablet to Projector	1
18.	Ph Meter		1
19.	Pvc Apron	One for Demonstration	1
20.	Safety Goggles	One for Demonstration	1
21.	Safety Shoes	One for Demonstration	1
22.	Sample Job Card	Unit= Pc	1
23.	Sample Log Books	Unit= Pc	1

24.	Sample Production Planning Schedule	Unit= Pc	1
25.	Sample Shift Schedule	Unit= Pc	1
26.	Scale		1
27.	Sound System 5.1 Channel Surround	Power Output: 40 W; One Subwoofer; Five Speakers; Maximum Output RMS Per Satellite 15 W; Maximum Output RMS Subwoofer 45 W; Remote; Chassis Material -Wood Chassis	1
28.	Tablet	Configuration: Screen Size: 9"; Operating System: Android 5.0; Processor: 1.8GHz; CPU Type: Quad Core ; Resolution: 2048 x 1536 (QXGA); Technology(Main Display): Super AMOLED; RAM: 2GB; Standard Battery Capacity(mAh): 5000; Video Resolution: FHD (1920 x 1080); ROM: 16 GB; AR Application by Simulanis	1
29.	Trainer Laptop	For Class room Instructor : INTEL CORE I3 and above ; RAM 4 GB; HARDDISK (500GB) ; GRAPHICS CARD 2GB; SCREEN 15''; MOUSE Wireless; MS Office	1
30.	Various Mask Cartridges	one each type	1
31.	Vernier Calipers		1
32.	VGA Cable for TV		3
33.	Virtual Reality Lab Kit	Oculus Quest 2 (128 GB) with Head Gear and two hand controllers	1
34.	Sample Flip Charts	Unit= Pc	1
35.	Sample Formats For BMR & BPR	Unit= Pc	1
36.	GMP Guideline Book	Unit= Pc	1
37.	Gum Boots	Unit= Pc	1
38.	Sample Material Safety Data Sheet	Unit= Pc	1
39.	PH Meter	Unit= Pc	1
40.	Projector	Unit= Pc	1
41.	HDMI Cable for Projector	Unit= Pc	1
42.	VGA Cable for Projector	Unit= Pc	1
43.	Access Control System	Unit= Pc	1
44.	LED TV 40 inch	Unit= Pc	1

45.	Augmented Reality Instructor Manual developed by Simulanis	Unit= Pc	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Marker Pen
3. Computer or Laptop attached to LCD projector.
4. Computer speaker
5. Pencil

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in the table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile *(if available)*
1.	Intas Pharmaceuticals Ltd.	Amit Kanabar	Head Technical Training	7-3, Phase-1, Gidc Estate, Ahmedabad, Gujarat 382445	8131841287	Amit_Kanabar@intaspharma.com	
2.	Tirupati Lifesciences	Jagdish Chauhan	Manager - CHRD		9816633372	jagdish.chauhan@tirupatiwellness.in	
3.	Dr Reddy's Laboratories Lts.	Satish Kumar Chekkapalli	Lead – cadre and capability Building	Bachupally, Hyderabad, Telangana 500090	9989349191	Satishkumarch@drreddys.com	
4.	Tirupati Wellness	Jagdish Chauhan	Manager - CHRD	Nahan Road Paonta Sahib, Disst, Paonta Sahib, Himachal Pradesh 173025	9816633372	jagdish.chauhan@tirupatiwellness.in	
5.	Beta Drug India Pvt. Ltd.	Mr. Bheem Singh	Sr. Manager- HR & Admin	Lodhi Majra Road, Baddi, Solan District, Himachal Pradesh, 174101		Bhim.s@betadruglimited.com	
6.	Zydus Life Sciences	Shivam Vig	DGM	Zydus Corporate Park', Scheme No. 63, Survey no. 536, Khoraj (Gandhinagar), Nr. Vaishnodevi Circle, S.G. Highway,	6358944060	Shivam.vig@zyduslife.com	
7.	Tirupati Medicare	Jagdish Chauhan	Manager - CHRD	Nahan Road Paonta Sahib, Disst, Paonta Sahib, Himachal Pradesh 173025	9816633372	jagdish.chauhan@tirupatiwellness.in	
8.	Smruthi Organics	Kamlakar Gajjam	Assistant General Manager HR	A-27 Midc Chincholi, Solapur, Chincholi,Solapur, Maharashtra 411018	7083225454	kdg@smruthiorganics.com	
9.	Innovare Labs Private Limited	Ravi	Assistant manger	Plot No. 23A-23B, Lalam Koduru(V), APSEZ, Denotified	7569279497	hr@innovarelabs.com	

				Area, Atchutapuram, Rambili Mandal, Anakapalli.			
10.	CMS Laboratories India Private Limited	Guntuku Jagadeeswara Rao	Managing Director	47-10-50, Dwaraka Nagar, 4th Lane, 3rd Floor, Above Union Bank,Visakhapatnam	8919168131	jdguntuku@gmail.com	
11.	Vasista Life Sciences Private Limited	PRASAD	HR	Plot No 27B1,B2, B13, B14, Atchutapuram, Gurjapalem, Andhra Pradesh 531011	7337345638	hr@vasista.co.in	
12.	Synaptics Labs Pvt Ltd	KISHORE REDDY	Senior Manager		9440002968	hr@synapticslabs.com	

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
1	500	-		-	-	-
2	1000	-		-	-	-
3	1500	-		-	-	-

Data to be provided year-wise for the next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
Version 1	2022	389	4	4									
Version 1 & 2	2023	1876	76	76									
Version 1 & 2	2024	975	127	127									

Applicable for revised qualifications only, data to be provided year-wise for the past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. DBT Skill Vigyan- TSCOST
2. National Apprenticeship Promotion Scheme (NAPS)
3. Self Fiananced

Content availability for previous versions of qualifications:

☒Participant Handbook ☒ Facilitator Guide ☐ Digital Content ☒ Qualification Handbook ☐ Any Other:

Languages in which Content is available: English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer to NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available at:
https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	☐Theory/ Lectures - Imparting theoretical and conceptual knowledge	LMS Portal- LSSSDC Daksh Portal will be utilized with online content/virtual lectures	50:50
2	☐Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	LMS Portal- LSSSDC Daksh Portal will be utilized with online content/virtual lectures	50:50
3	☐Showing Practical Demonstrations to the learners	LMS Portal- LSSSDC Daksh Portal will be utilized with online content/virtual lectures / Skill labs	100:00
4	☐Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	Skill Labs	100:00
5	☐Tutorials/ Assignments/ Drill/ Practice	LMS Portal- LSSSDC Daksh Portal will be utilized with online content/virtual lectures / Field Visits	50:50
6	☐Proctored Monitoring/ Assessment/ Evaluation/ Examinations	Parakh	00:100
7	☐On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	Offline	00:100

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
1. LFS/N0274 V1.0: Discuss about Life Sciences Industry and Basics of manufacturing Operations	**Life Sciences industry and Manufacturing Occupation**	20	0	5	5
	PC1. discuss key insights in the life sciences sector through various market research reports				
	PC2. Identify the major segments within the life sciences industry (pharmaceuticals, biotechnology, medical devices, etc.).				
	PC3. Elaborate importance of a skilled individual in manufacturing Occupation				
	PC4. explain the role of government policies and initiatives in promoting the growth of the life sciences industry in India.				
	Basics of manufacturing Operations	20	30	10	10
	PC5. comply with key regulatory requirements for manufacturing facilities (e.g., cGMP, cGLP, cGDP guidelines).				
	PC6. ensure ethical conduct followed in life sciences manufacturing, including data integrity and patient safety.				
	PC7. analyze the impact of standard quantity effect on product quality and efficacy.				
	PC8. analyze the role of each component in ensuring efficient and compliant manufacturing operations				
	Total Marks	40	30	15	15
2.LFS/N1219 v3.0: Monitor the production process in compliance with cGMP and other regulatory guidelines	**Pre-production process**	***10***	***15***	***3***	***2***
	PC1. Ensure to wear PPE before entering in the production area and follow cleanroom behavior				
	PC2. Ensure that environmental conditions of the production area are maintained within the limits specified in the respective BMR				
	PC3. Ensure that all the pre analysis checks are performed as per Standard Operating Procedure (SOP) and cGMP guidelines				
	PC4. Identify out of order, non- calibrated, non -validated equipment and ensure they are segregated for maintenance				
	PC5. Ensure the availability of sufficient stock of raw materials and chemicals for production process as per the production schedule				
	Production Process	***10***	***15***	***3***	***2***
	PC6. Maintain cGMP standards at shop floor and conditions suitable for production of quality products as per requirement				
	PC7. Prepare standard operating procedures, equipment master list, and equipment qualification plan for production process				
	PC8. Ensure the raw material is processed strictly as per BMR and SOP				

	PC9. Check the production process is carried out as per the respective production schedules				
	PC10. Monitor all the critical operations of the production process				
	PC11. Check on production yields and reconciliation at various stages of production process				
	PC12. Implement and monitor automation systems and control technologies to optimize production efficiency, reduce manual errors, and ensure consistent product quality as per cGMP standards.				
	PC13. Monitor the production output of each shift operation for recording in the Batch Process Report (BPR) as per the approved guidelines				
	PC14. Ensure that all the in-process checks are carried out and quality of the product is ensured at each stage as per the Standard Operating Procedures (SOP)				
	PC15. Observe production incidents for any deviations from the standard production process				
	PC16. Coordinate with QA for any change by originating change control request				
	PC17. Verify various online documentation entries at each production step in a manufacturing process information system and lab management information system				
	Post-production process	***5***	***10***	***3***	***2***
	PC18. Observe to ensure waste disposal in compliance with WHO guidelines and ICH-cGMP rules				
	PC19. Monitor the line clearance activities performed by junior staff on the shop floors for smooth work- flow				
	PC20. Perform verification for the labels on finished good containers in compliance to labelling guidelines				
	Environment Sustainability	***5***	***10***	***3***	***2***
	PC21. Ensure energy conservation by switching off the machine and equipment post operations				
	PC22. Identify ways to optimize the usage of electricity/energy in various tasks/activities/processes				
	PC23. Ensure energy conservation by optimizing the machine/ equipment performance				
	PC24. Identify recyclable and non-recyclable, and hazardous waste generated				
	PC25. Segregate waste into different categories to achieve minimum pollution of land and water				
	PC26. Check for water leakage in plant/ work area and take corrective actions				
	Total	***30***	***50***	***12***	***8***

3 LFS/N1220 v3.0: Perform reporting and documentation for regulatory compliance	*Reporting*	*10*	*15*	***5***	***5***
	PC1. Follow reporting and escalation matrix as prescribed by the company				
	PC2. Report defects/problem/incidents/quality issues/as applicable in a timely manner to the appropriate authority as laid down by the company				
	PC3. Provide reports of deviations and OOS and OOT incidents to quality assurance team				
	PC4. Escalate any change control request to quality assurance and regulatory team for approval				
	Recording and documentation	***10***	***15***	***5***	***5***
	PC5. Identify documentation to be completed for assigned activity				
	PC6. Review and approve the logbook entries made by operators for all the production batches				
	PC7. Complete all documentation within stipulated time according to regulatory guidelines and SOP				
	PC8. Prepare deviation reports with detailed findings and recommendations as per SOPs				
	PC9. Ensure that the final document meets regulatory and compliance requirements as per cGDP and cGMP				
	Data Integrity	***10***	***15***	***3***	***2***
	PC10. Maintain all original and controlled document files and manufacturing records in a timely and accurate manner following ALCOA PLUS principles				
	PC11. Respond to requests for information in an appropriate manner whilst following organizational procedures				
	PC12. Make sure documents are available to all appropriate authorities to inspect/ audit				
	Total	**30**	**45**	**13**	**12**
4. LFS/N0111 v3.0: Ensure adherence to Environment, health and safety guidelines in a production facility and cGMP controlled areas	*Follow health and hygiene protocols*	***10***	***15***	***3***	***2***
	PC1. Comply with health and personal hygiene related protocols as per WHO standards and ICH GMP guidelines				
	PC2. Wash hands before entering in the production area with soap/alcohol-based sanitizers				
	PC3. Report any allergy, sickness or any other environment-related breach before or after entering the work premises to the designated person				
	PC4. Take preventive actions on the report of any allergy, sickness or any other environment-related breach reported by subordinates				

	PC5. Follow gowning procedures while entering an environment-controlled work area and ensure adherence to the same by others				
	Adhere to safety and security procedures	***10***	***15***	***2***	***5***
	PC6. Comply with safety and security policies and procedures				
	PC7. Ensure the use of appropriate safety gears like headgear, masks, gloves and other accessories as mentioned in the guidelines, by self and subordinates while carrying out work				
	PC8. Take preventive and corrective actions based on the report of any identified breaches in safety and security policies and procedures by subordinates				
	PC9. Ensure that discipline for material segregation and 5S system is followed at the storage area				
	PC10. Comply with material handling, segregation, and storage guidelines for hazardous material				
	PC11. Take corrective actions for reported hazards in consultation with EHS personnel				
	PC12. Complete the records of safety drills and trainings undertaken by self and subordinates				
	Adhere to emergency procedures	***10***	***15***	***5***	***3***
	PC13. Report any hazards that he/she is not competent to deal with the relevant EHS personnel and warn other people who may be affected				
	PC14. Raise the alarm and inform the concerned person immediately for action in the cases of spill, fall, injury, toxic inhale, fire or explosion				
	PC15. Follow emergency protocols for any alarms and ensure the safety of subordinates in the area under supervision				
	PC16. Follow emergency procedures efficiently				
	PC17. Ensure injured employees are provided appropriate first aid and medical aid				
	Total Marks	***30***	***45***	***10***	***10***
	Coordination with Manager	***10***	***15***	***3***	***2***
	PC1. Coordinate with the reporting manager to obtain work instructions and develop the production plan				

5. LFS/N0117 v3.0: Coordinate with manager, team members, cross-functional teams, and auditors	PC2.	Communicate to reporting manager about process-flow improvements and production defects received from previous process				
	PC3.	Inform concern authority for any potential hazards or expected process disruptions				
	PC4.	Provide maintenance, engineering related or process related change control request and its impact reports proactively to the manager				
	PC5.	Report periodically the status of planned batch/ continuous manufacturing schedule to manager within the timeline				
	Coordination with team members and cross-functional teams		***10***	***15***	***3***	***2***
	PC6.	Work as a team with colleagues and share work as per their own workload				
	PC7.	Train junior chemists on procedures and provide assistance to them when needed				
	PC8.	Communicate and discuss workflow related difficulties to find solutions with mutual agreement				
	PC9.	Coordinate with maintenance team for any breakdowns and preventive and corrective maintenance of production equipment's				
	PC10.	Coordinate with Engineering department at the time of equipment qualification activities				
	PC11.	Coordinate with Stores manager to receive chemicals and materials in time				
	PC12.	Coordinate with quality control team for raw material availability / release of raw materials and, semi-finished and finished goods				
	PC13.	Coordinate with QA team for line clearance, change control approvals, calibration and validation activities				
	Respond to audit queries		***5***	***10***	***3***	***2***
	PC14.	Provide clear answers to the auditor's queries				
	PC15.	Produce the documented records of performed activities and operations to auditors				
	PC16.	Maintain data integrity while responding to auditors and regulatory inspectors				
	Sensitivity towards all genders and people with disability					

		5	***10***	***3***	***2***
	PC17. Respect all the genders, religions, and caste				
	PC18. Empathize with the people with disability				
	PC19. Offer support or help to a person with disability only when asked				
	PC20. Ensure to adhere with the guidelines laid in Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act				
	PC21. Report any violation of prevention of sexual harassment (POSH) rules immediately to the POSH committee				
	Total	***30***	***50***	***12***	***8***
6.DGT/VSQ/N0102 V1.0: Employability Skills (60 Hours)	*Introduction to Employability Skills*	***1***	***1***	***-***	***-***
	PC 1. understand the significance of employability skills in meeting the current job market requirement and future of work.				
	PC 2. identify and explore learning and employability relevant portals				
	PC 3. research about the different industries, job market trends, latest skills required and the available opportunities				
	Constitutional values – Citizenship	***1***	***1***	***-***	***-***
	PC 4. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.				
	PC 5. follow environmentally sustainable practices				
	Becoming a Professional in the 21st Century	***1***	***3***	***-***	***-***
	PC 6. recognize the significance of 21st Century Skills for employment				
	PC 7. practice the 21st Century Skills such as Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life				
	PC 8. adopt a continuous learning mindset for personal and professional development				
	Basic English Skills	***3***	***4***	***-***	***-***
	PC 9. use basic English for everyday conversation in different contexts, in person and over the telephone				
	PC 10. read and understand routine information, notes, instructions, mails, letters etc. written in English				
	PC 11. write short messages, notes, letters, e-mails etc. in English				

	Career Development & Goal Setting	***1***	***2***	**-**	**-**
	PC 12. identify career goals based on the skills, interests, knowledge, and personal attributes				
	PC 13. prepare a career development plan with short- and long-term goals.				
	Communication Skills	***2***	***2***	**-**	**-**
	PC 14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings				
	PC 15. use active listening techniques for effective communication				
	PC 16. communicate in writing using appropriate style and format based on formal or informal requirements				
	PC 17. work collaboratively with others in a team				
	Diversity & Inclusion	***1***	***1***	**-**	**-**
	PC 18. communicate and behave appropriately with all genders and PwD				
	PC 19. escalate any issues related to sexual harassment at workplace according to POSH Act				
	Financial and Legal Literacy	***2***	***3***	-	-
	PC 20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.				
	PC 21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook				
	PC 22. identify common components of salary and compute income, expenses, taxes, investments etc				
	PC 23. identify relevant rights and laws and use legal aids to fight against legal exploitation				
	Essential Digital Skills	***3***	***5***	**-**	**-**
	PC 24. operate digital devices and carry out basic internet operations securely and safely				
	PC 25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.				
	PC 26. display responsible online behavior while using various social media platforms				

	PC 27. create a personal email account, send and process received messages as per requirement				
	PC 28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications				
	PC 29. utilize virtual collaboration tools to work effectively				
	Entrepreneurship	***2***	***3***	***-***	***-***
	PC 30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research				
	PC 31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion				
	PC 32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity				
	Customer Service	***1***	***2***	***-***	***-***
	PC 33. identify different types of customers and ways to communicate with them				
	PC 34. identify and respond to customer requests and needs in a professional manner				
	PC 35. use appropriate tools to collect customer feedback				
	PC 36. follow appropriate hygiene and grooming standards				
	Getting ready for apprenticeship & Jobs	***2***	***3***	***-***	***-***
	PC 37. create a professional Curriculum vitae (Résumé)				
	PC 38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively				
	PC 39. apply to identified job openings using offline /online methods as per requirement				
	PC 40. answer questions politely, with clarity and confidence, during recruitment and selection				
	PC 41. identify apprenticeship opportunities and register for it as per guidelines and requirements				
	NOS Total	***20***	***30***	***-***	***-***
7. LFS/N1221 v3.0: Manage API/ excipient manufacturing process in compliance with	*API/ excipient manufacturing process*	***15***	***30***	***10***	***5***
	PC1. Ensure the API/excipient manufacturing process area is clean and is as per cleanroom guidelines				

cGMP and other regulatory guidelines	PC2.	Ensure the ICH Q7 GMP guidelines are followed for API/excipient manufacturing process				
	PC3.	Ensure raw material used for API/excipient manufacturing process is QC approved				
	PC4.	Check for labels on all the equipments, chemicals, reagents and raw materials				
	PC5.	Ensure implementation of all the controls for equipment as per written procedure to assure the quality of intermediate or API/ excipient				
	PC6.	Ensure all the API/excipient manufacturing process are carried out as per SOP				
	PC7.	Ensure final manufactured product is QC and QA approved and meets all quality standards				
	PC8.	Analyse the root cause for out-of-specification (OOS) and out-of-trend (OOT) products in case of deviations in production process				
	PC9.	Maintain batch production records for each intermediate and API/ excipient product				
	cGMP compliant documentation		**10**	**15**	**10**	**5**
	PC10.	Perform documentation of the activities as per ALCOA principles				
	PC11.	Record the required information of all significant activities, incidents and deviations as per recording formats in compliance with SOP and ICH-GMP guidelines				
	PC12.	Identify corrective and preventive action (CAPA) for every incident and deviations in compliance with cGMP and other regulatory guidelines				
	PC13.	Review and approve the change control request in case of deviations in consultation with QA and regulatory team				
	PC14.	Review and approve the logbook entries and trial run records				
	PC15.	Maintain online documentation related to production activities like BMRs, BPRs, log books , daily records and production SOP's as per cGMP and cGDP guidelines				
	Total Marks		***25***	***45***	***20***	***10***
8. LFS/N1222 v3.0: Manage sterile formulation	*Sterile manufacturing process*		***15***	***30***	***10***	***5***
	PC1.	Wear personal protective equipment before entering into the production area				

manufacturing process and maintain compliance with cGMP and other regulatory guidelines	PC2.	Ensure the sterile manufacturing process area is clean and is as per cleanroom guidelines				
	PC3.	Ensure raw materials, chemicals and reagents used in sterile manufacturing process are properly capped and stored according to specified conditions to avoid cross contamination				
	PC4.	Check the calibration and validation status of equipment used in sterile manufacturing facility				
	PC5.	Ensure sterile manufacturing process is carried out as per SOP				
	PC6.	Check finished sterile product containers are closed and properly labeled as per standard labeling guidelines				
	PC7.	Analyse the root cause for out-of-specification (OOS) and out-of-trend (OOT) products, deviations and incidents in production process				
	PC8.	Maintain all the records for sterile product manufacturing batches				
	cGMP compliant Documentation		**10**	**15**	**10**	**5**
	PC9.	Perform documentation of the activities as per ALCOA principles				
	PC10.	Record the required information of all significant activities, incidents, and deviations as per recording formats in compliance with SOP and ICH-GMP guidelines				
	PC11.	Identify corrective and preventive action (CAPA) for every incident and deviations in compliance with cGMP and other regulatory guidelines				
	PC12.	Review and approve the change control request in case of deviations in consultation with QA and regulatory team				
	PC13.	Review and approve the logbook entries and trial run records				
	PC14.	Maintain online documentation related to production activities like BMRs, BPRs, log books , daily records and production SOP's as per cGMP and cGDP guidelines				
	Total		**25**	**45**	**20**	**10**
9. LFS/N1216 v2.0: Manage non-sterile formulation manufacturing process and maintain	*Non-sterile manufacturing process*		**15**	**30**	**10**	**5**
	PC1.	Wear personal protective equipment before entering into the production area				
	PC2.	Ensure the non-sterile manufacturing process area is clean and is as per cleanroom guidelines				

compliance with cGMP and other regulatory guidelines	PC3. Conduct regular checks on equipment and instrument used in non-sterile manufacturing process for calibration and validation state				
	PC4. Ensure all chemicals, reagents and raw materials are clearly identified by labels and remain permanently attached to the sample containers under all storage conditions				
	PC5. Ensure non-sterile manufacturing process is carried out as per SOP				
	PC6. Analyse the root cause for out-of-specification (OOS) and out-of-trend (OOT) products, deviations and incidents in production process				
	PC7. Ensure finished products are stored under proper storage conditions and are labeled as per standard labeling guidelines				
	PC8. Maintain the records for non- sterile product manufacturing batches				
	GMP compliant documentation	**10**	**20**	**5**	**5**
	PC9. Document the activities as per ALCOA principles				
	PC10. Record the required information of all significant activities, incidents, and deviations as per recording formats in compliance with SOP and ICH-GMP guidelines				
	PC11. Identify corrective and preventive action (CAPA) for every incident and deviations in compliance with cGMP and other regulatory guidelines				
	PC12. Review and approve the change control request in case of deviations in consultation with QA and regulatory team				
	PC13. Review and approve the logbook entries and trial run records				
	PC14. Maintain online documentation like BMRs, BPRs, log books, daily records etc related to production activities as per SOP`s, cGMP and cGDP guidelines				
	Total Marks	**25**	**50**	**15**	**10**
10. LFS/N1217 v2.0 Manage AYUSH drug manufacturing process and maintain compliance	*AYUSH drug manufacturing process*	**15**	**30**	**10**	**5**
	PC1. Wear personal protective equipment before entering into the production area				
	PC2. Ensure raw material used in the manufacturing of AYUSH drugs are authentic and are free from contamination				

with cGMP and other regulatory guidelines	PC3. Ensure each container used for raw material, chemical and reagent storage shall be identified with label				
	PC4. Check the calibration and validation status of all the equipment used in processing area				
	PC5. Ensure that manufacturing process is carried out as per SOP				
	PC6. Analyse the root cause for out-of-specification (OOS) and out-of-trend (OOT) products, deviations and incidents in production process				
	PC7. Ensure finished products are stored under proper storage conditions and are labeled as per standard labeling guidelines				
	PC8. Maintain batch manufacturing records for AYUSH drugs manufactured				
	GMP compliant documentation	**10**	**15**	**10**	**5**
	PC9. Perform documentation of the activities as per ALCOA principles				
	PC10. Record the required information of all significant activities, incidents, and deviations as per recording formats in compliance with SOP and ICH-GMP guidelines				
	PC11. Identify corrective and preventive action (CAPA) for every incident and deviations in compliance with cGMP and other regulatory guidelines				
	PC12. Review and approve the change control request in case of deviations in consultation with QA and regulatory team				
	PC13. Review and approve the logbook entries and trial run records				
	PC14. Maintain online documentation related to production activities like BMRs, BPRs, log books, daily records and production SOP's as per cGMP and cGDP guidelines				
	NOS Total	**25**	**45**	**20**	**10**
11. LFS/N1218 v2.0 Manage Sanitary and Personal Hygiene Product manufacturing process in compliance with cGMP and other regulatory guidelines	*Sanitary and Personal Hygiene Product manufacturing process*	**15**	**30**	**10**	**5**
	PC1. Wear personal protective equipment before entering into the production area				
	PC2. Ensure the production area is clean and meets the cleanroom requirements				
	PC3. Ensure raw material used for sanitary/ personal hygiene product manufacturing is clean and free from any contamination				

	PC4. Check for the labels on all the tools and raw material/ chemicals used in manufacturing process				
	PC5. Check the calibration and validation status of all the equipment used in production area				
	PC6. Monitor all the manufacturing operations and ensure compliance with standard protocols				
	PC7. Analyze the root cause for out-of specification (OOS) and out-of-trend (OOT) products, deviations and incidents in production process				
	PC8. Maintain all the batch/ continuous manufacturing records				
	cGMP compliant documentation	**10**	**15**	**10**	**5**
	PC9. Perform documentation of the activities as per ALCOA principles				
	PC10. Record the required information of all significant activities, incidents, and deviations as per recording formats in compliance with SOP and ICH-GMP guidelines				
	PC11. Identify corrective and preventive action (CAPA) for every incident and deviations in compliance with cGMP and other regulatory guidelines				
	PC12. Review and approve the change control request in case of deviations in consultation with QA and regulatory team				
	PC13. Review and approve the logbook entries and trial run records				
	PC14. Maintain online documentation related to production activities like BMRs, BPRs, logbooks, daily records, and production SOP's as per cGMP and cGDP guidelines				
	NOS Total	**25**	**45**	**20**	**10**
12. LFS/N0120 v2.0: Establish own enterprise and perform various entrepreneurial activities to run the business operations in Life Sciences Sector	*Set up enterprise and perform entrepreneurial activities*	**20**	**30**	**6**	**3**
	PC1. Perform a survey in the identified area for business activities to identify prospective customers and business opportunity				
	PC2. Identify products and/ or services and it's sources, that match the business opportunity				
	PC3. Develop business proposal with objective and identified business area for registering the proposed business as independent entity with competent authorities				

	PC4. Submit business proposals and feasibility plans for securing the required funding from govt. schemes for MSMEs like MUDRA etc. as and when needed				
	PC5. Present the business proposal to investors and stakeholders to gain their confidence and trust for possible funding				
	PC6. Ensure setting up the infrastructure and resources for business as per approved plan and investors/ shareholders agreement				
	PC7. Enroll into various government schemes and programs for MSME and avail the benefits				
	PC8. Promote the product/ services through various means including digital promotions in line to regulations for promotion and sale as per land of law				
	PC9. Develop the supply chain and distribution network				
	PC10. Maintain updated information regarding new market trends to provide service to customers and constantly upskill self and employees for futuristic technologies, innovations and methodologies				
	Maintenance of accounts and ledgers	**10**	**20**	**6**	**5**
	PC11. Ensure to generate a final invoice for the services rendered/ or products sold				
	PC12. Collect payment either in cash (as per RBI guidelines)/ cheque/ demand draft or through online transactions via RTGS/NEFT/UPI etc.				
	PC13. Ensure accounts and ledgers are maintained for the material supplied, payables and receivables, loan ledgers, taxes collected and paid into government treasury as well for wages paid and statutory benefits like PF, ESI contribution deposited with authorities				
	PC14. Ensure maintenance and reconciliation of a monthly account as well as movable and immovable assets and stock to keep track of profit/ loss as well as periodic audit as per legal requirements				
	Comply with legal, regulatory and statutory standards	***4***	***8***	***4***	***4***
	PC15. Comply with workplace health and safety rules stipulated by local authorities				

	PC16. Comply with rules related to taxes and licensing regulations				
	PC17. Comply with prevalent labour laws and keep records for employee's qualifications, employment as well as trainings				
	PC18. Comply with regulations and protocols related to maintenance of product/ service license including the pre conditions (if any)				
	PC19. Comply with quality system like ISO/GMP/GLP etc and any other rule mandated by appropriate regulatory authorities				
	PC20. Comply with pollution norms as per land of law and ensure near zero pollution for a sustainable environment and to earn carbon credits				
	PC21. Ensure that business facility and employees are always prepared and ready for any surprise inspection/ audit from clients/ regulatory/ statutory authorities				
	NOS Total	***30***	***50***	***12***	***8***
13. LFS/N0121 v2.0: Maintain the critical business documents as Entrepreneur in Life Sciences Sector	*Infrastructure related documentation*	***5***	***20***	***5***	***2***
	PC1. Ensure documentation and maintenance of records for architectural building layout like blueprint of plant/lab, electric circuit and plumbing layouts and safety equipment layout, infrastructure and asset insurance and lease/rent contracts/ sale deed (if owned facility)				
	PC2. Ensure documentation and maintenance of records for all machineries, equipment and tools installed/used in the plant/ lab unit, with supplier/manufacturer details, manuals of all machineries / equipment, installation and qualification records and annual maintenance details etc				
	PC3. Ensure documentation and maintenance of records for engineering and maintenance of each machinery/equipment, machine utilization, machine performance, breakdown details, corrective actions, spares changed, machine/equipment condition etc				
	Supply Chain related documentation	***5***	***20***	***5***	***3***
	PC4. Ensure documentation and maintenance of records for all raw materials, ingredients and packaging materials handled, like name of the supplier, batch details, quantity supplied and quality of the materials supplies etc as well as				

	PC5. Ensure documentation and maintenance of records for each supplier quality report on raw materials, ingredients, packaging materials, internal and external quality report on finished products, consumer and customer complaints , corrective actions, legal documents (if any)				
	PC6. Ensure documentation and maintenance of records for storage facility, like condition of storage facility, storage parameters if any like temperature, humidity, pressure (as applicable), space utilised, stacking procedure etc				
	PC7. Ensure documentation and maintenance of records for distribution details like transport details, quality, hygiene and cleanliness of vehicle, quantity loaded in the vehicle, distribution routes , outlet details, customer/ consumer details, distribution quantity, quantity returned etc.				
	Documentation for sales & marketing	***5***	***10***	***3***	***3***
	PC8. Ensure documentation and maintenance of records for long term and short term business plans, feasibility reports, investor/shareholder agreements and disbursement and payment records for loan/grant/equity etc.				
	PC9. Ensure documentation and maintenance of records for sale like customer details, customer type, location, quantity purchased by each stockist/consumer, frequency of purchase, sale details like quantity of products/brand sold in each territory				
	Quality audit and client/regulatory inspections related documentation	***5***	***5***	***2***	***2***
	PC10. Ensure documentation and maintenance of records for internal/ external audits with its observations, notices/ feedback, action reports and final submission of audit action reports				
	PC11. Ensure documentation and maintenance of records for every communication sent to or received from regulatory/ licensing authorities				
	NOS Total	***20***	***55***	***15***	***10***
Grand Total		**355**	**595**	**174**	**126**

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:

The assessment for the Training will be conducted toward the end of the training duration. The assessment of the qualification shall be carried out by NCVET approved assessment agencies empaneled by LSSSDC after a defined evaluation process. For Execution of the assessment for training for the qualification, LSSSDC will be engaging more than one NCVET approved assessment agency/ body.

1.1 Criteria of selection of assessment body/agency:

The assessment body/agency is selected based on:

- Prior experience and understanding of Life Sciences or similar sector.
- Experience in conducting assessments for similar job roles.
- Manpower and Technical capabilities.
- Geographical reach
- Existing Network in the Life Sciences Sector
- Agencies internal policies to maintain standards, quality & professional Integrity
- Agencies policy and practices in assessor management
- NCVET approval

1.2 Assessment tool development for assessment of Training:

For the Training assessment, the assessment instrument development is done by the selected assessment body with close monitoring and support of LSSSDC at every stage.

1.2.1 Digital Written test for knowledge assessment:
Scope – Is used to test the knowledge component of the Qualification/ Micro Credential/ NOS.
Tools –computer or tab based online or offline.
Method – objective type questions, match the columns, fill in the blanks, tick the odd man out, choose the correct option, choose the best answer, True or false, Identify the object, tool or machinery, arrange in proper sequence, case study, scenario-based responses.
Analysis – Question paper is divided into sections. Each Section intends to assess a particular knowledge field of the trainee. Thus, section-wise calculation of marks gives a clear idea of the areas of improvement or expertise of the trainee. While a consolidated mark gives the overall rating of the trainee.

1.2.2 Digital Written test for skill assessment:

Scope – Is used to test primarily the Skill component of the Qualification/ Micro Credential/ NOS. Trainee's expertise in handling and managing the situation is tested.
Tools – computer or tab based online or offline questions
Method – A situation is narrated or created in the question posed to the trainee and he is asked objective type questions to select the correct reaction to the situation. The selected situations are based on real situations.
Analysis – Question paper is divided into sections. Each Section intends to assess a particular skill field of the trainee. Thus, section-wise calculation of marks gives a clear idea of the areas of improvement or expertise of the trainee. While a consolidated mark gives the overall rating of the trainee.

1.3 Steps for assessment tool development:

- The selection of assessment tool(s) is done as per the assessment criteria prescribed in Qualification/ Micro Credential/ NOS.
- For Chemist- Production (Pharma, Cosmetics & Biologics) assessment , a blueprint of the question paper is part of the assessment tool for training in manufacturing operation.
- Development of layout of Question paper is such that the entire PCs (Performance Criteria) of that Qualification/ Micro Credential/ NOS are covered.
- Score per question maps with the weightage given to that PC, in the assessment criteria, and the level of difficulty of the question.
- SME is screened and approved by LSSSDC. He/she is oriented by both LSSSDC and Assessment agency on – creating question Bank, level of questions, end the desired outcome of the assessment.

1.4 Execution of Training Assessment/ RPL Assessment:

- Once the assessment date for training is decided with common agreement of Industry/ Vocational Training Centre and LSSSDC, LSSSDC allocates the batch to an NCVET approved and LSSSDC empaneled assessment body/agency.
- Assessment agency ensures
    - the availability of required infrastructure
    - the availability of validated assessment tools for the assessment of training for the assigned qualification
    - the availability of assessor as per assessor eligibility criteria of the qualification
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys LSSSDC certified assessor for executing the assessment
- LSSSDC monitors the assessment process & records
- The assessment is executed in two possible ways depending on the choice of the industry:

1.4.1 Tab based assessment using physical proctoring
1.4.2 Smartphone-based assessment using e-proctoring

1.4.1 Tab-based assessment using physical proctoring

- A representative from the Assessment agency is present on the day of assessment to executing the assessment at the venue in case of physical proctoring.
- The assessment agency representative carries an identity card and letter from the council authorizing to conduct the assessment.
- Assessment agency representative ensures the authenticity of Trainee's identity by verifying the documents (any document issued by GOI, such as Ration card, Aadhaar Card, Driving License, Passport, Election card, etc)

- The assessment agency representative maintains the records of attendance, verified documents, and tablet instruments used in the assessment.
- Assessment agency representative collects evidence of the assessment in the best possible way (videos, pictures, voice recordings, etc)
- Assessment agency representative transfers the assessment scores from tab to assessment agency server, using a secure, encrypted web-based program.
- The assessment agency after processing the results and putting them in standard format hands over to LSSSDC within 7 days of assessment.

1.4.2 Smartphone-based assessment using e-proctoring

- All trainees enrolled in the batch due for assessment, are registered on an assessment tool application using their unique mobile number and e-mail ID along with a Govt. ID issued proof.
- An assessment link is sent to the mail ID of each trainee with a defined expiry date of the link.
- Trainee at any location can click on the link using his/her smartphone or a web camera-enabled computer system
- Using the unique credentials and Govt ID number, the trainee logs in for the start of assessment and completes the assessment.
- The authenticity of Trainee's identity is done by assessment application by verifying the documents (any document issued by GOI, such as Ration card, Aadhaar Card, Driving License, Passport, election card, etc.) and a live photo capture
- A live video of the candidate during the assessment is captured to collect the evidence of the assessment

- Once the assessment is complete, the assessment application automatically assessment scores to the assessment agency server, using a secure, encrypted web-based program.
- The assessment agency after processing the results and putting them in standard format hands over to LSSSDC within 7 days of assessment.

2. Testing Environment:

- The Centre/ location of the assessment is pre decided and geo tagged in case of physical assessment
- The assessment of LSSSDC qualifications is 99% done in digital environment while 1% pen and paper is used ONLY in business exigencies
- Based on the size of batch the assessment duration/ no. of required assessors is decided to ensure detailed assessment without any negative impact on quality of assessment
- The system driven automated assessment management system ensures uniform time allocation to each student, unique logins for each student and automated randomization of questions for developing multiple sets of question paper for single batch.
- Identity check of the student is mandated

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) of Assessment Agency are verified by the other SME of LSSSDC
- All Questions are mapped to the specified assessment criteria
- Assessor eligibility criteria are structured to ensure quality and knowledge credentials of an assessor like-wise the trainer's quality and knowledge credentials.
- Eligible Assessor must be certified by LSSSDC for the respective and relevant qualification
- The tools used for assessment are validated for relevance and feasibility for skill assessment of the qualification in consideration

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- ID Proof of the students
- Educational qualification of students
- Certificate of Trainer
- In case of Physical assessment, geotagged photographs of the students undergoing assessment
- While students are undergoing assessment on the digital assessment platform the system captures random photos of the student which is audited by LSSSDC

5. Method of verification or validation:

- Surprise visit to the assessment location
- ID Proof of the students for identity verification
- Educational qualification verification of students for validation of entry level criteria
- Certificate of Trainer to verify the credential of vocational educator
- Random photos taken by the digital system are verified during audit by the assessment team

6. Method for assessment documentation, archiving, and access

- Hard copies and digital copies (whichever is applicable) of the assessment evidences are stored with assessment agency team for 5 years
- Assessment transcripts are stored in the server space of assessment agency for 5 years
- Assessment question banks and validation records are stored with assessment agency and LSSSDC digitally
- Assessment records are archived with assessment agency archive server after 5 years for another 5 years
- Access of assessment records are controlled with restricted access to concerned department and stakeholders and is shared on demand after due approval of Head of Assessment and Certification-LSSSDC

Annexure: Assessment Strategy

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS defines the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process is obtained when a the competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information about a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service, or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf