INFO-COMMUNICATIONS MEDIA
DEVELOPMENT AUTHORITY
OF SINGAPORE

CITREP+
Course Mapping Process

Human Capital Development (HCD)

CITREP+

1. Objectives
2. Workflow
3. Vocab
4. NICF Course Mapping
5. Steps to Obtain Job Roles and Competency Units (CUs)
6. Annex A

1

CITREP+ Objectives

CITREP+ Objectives

- To build a strong core of specialised Singaporean ICT professionals with Smart Nation capabilities

- To develop and offer quality infocomm professional development technology courses and professional certifications that impart knowledge and skills in relevant areas

2

Overview of CITREP+ Workflow Process

Overview of CITREP+ Workflow Process

- Focus on <u>content evaluation</u>
- <u>Relevance</u> of the course/certification against key competencies in NICF
- Processing time average 4 to 6 weeks

- Assessment of Course Provider adequacy
- Processing time average 1 to 3 weeks

- Course providers to enroll trainees before commencement of courses/exam

- Provide trainees with required supporting documents
- Trainees to submit claims upon completion

3

CITREP+ Vocab

CITREP+ Vocab

Important "VOCAB"

NICF –

CAB / CO - Certificate Awarding Body, Certification Owner, Curriculum Owner

Entities issuing qualifications (certificates or titles)

CP - Course Provider

Entities that deliver the training courses or examinations

ICMS –

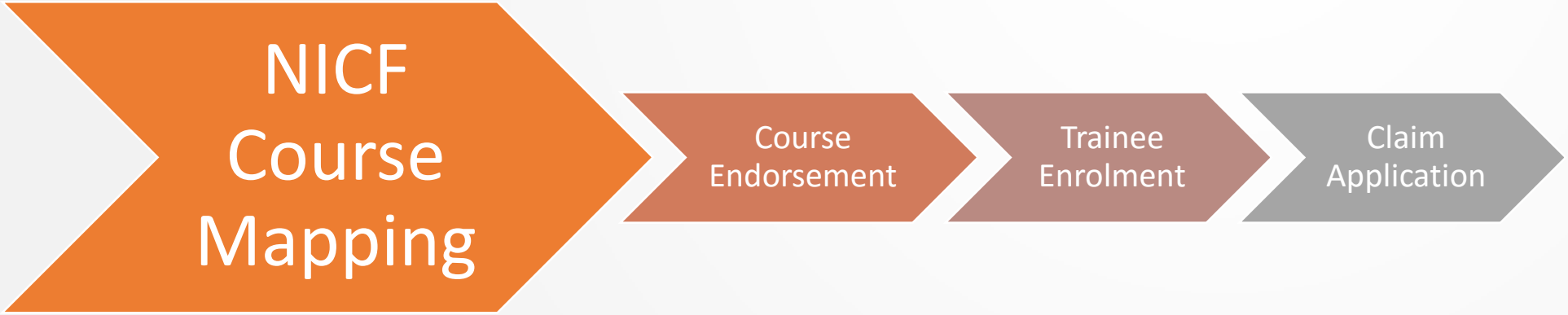
AA - Approving Authority

AO – Administrative Officer

4

NICF Course Mapping

NICF Course Mapping



NICF Course Mapping validity

Up to 31 March 2018

NICF Course Mapping - Overview

❑ The National Infocomm Competency Framework (NICF)

➢ National Infocomm Roadmap that **articulates the competency requirements** of key Infocomm professionals.
➢ Identifies various ICT sectors and defines the functional groups, key job roles and its functions
➢631 competency standards for 334 industry job roles

❑ Facilitate the course mapping process for CITREP+

- ➢ Leverage on NICF to **determine the types of skills and competencies required** for various infocomm jobs
- ➢ Develop training strategies for professionals to acquire these skills

Competency Standards – How they do affect Course Providers?

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❑ Endorsement and Branding

- ➢Benchmark for Quality and Standards
- ➢Marketing Edge – locally and regionally
- ➢Recognised by employers

❑ Alignment with NICF

- ➢Facilitate the endorsement process for CITREP+ programme
- ➢Courses that are endorsed as being NICF Aligned/Accredited will be featured on NICF portal

NICF Course Mapping

Identify which NICF **skill area** that best fit your course in NICF*

(*Please refer to www.imda.gov.sg/CITREP

CITREP+ Guides: NICF Framework for CITREP+ Course Mapping for more information)

Select the most relevant **job role (s)** based on the identified skill area of your course

Course must be mapped to at least **2 relevant Competency Units (CUs)** for each NICF job role(s) selected **AND at least one of the required CU must be core** to the job role.

All approved new course mapping will be valid **till 31 March 2018**

Supported NICF Skill Areas

- **Areas eligible for Courses and Certification support level**

(Entry Level & Above)

Business Analytics

- e.g. Big Data Analytics, Operations Research, Statistics and Mining, Text Analyst

Cloud Computing

- e.g. Cloud Architecture, Cloud Engineering, Cloud Operations, Cloud Services

Data Centre Management

- e.g. Data Centre Design and Implementation, Data Centre Operations, Maintenance and Monitoring

Database Management

Enterprise Mobility

- e.g. Enterprise Mobility Design, Enterprise Mobility Development & Deployment

Supported NICF Skill Areas

- **Areas eligible for Courses and Certification support level (Entry Level & Above)**

Enterprise Networks Design & Management

- e.g. Network Operations Management, Network Operations Management, Monitoring and Maintenance, Network Planning and Design

Green ICT

- e.g. Data Centre Design and Implementation, Data Centre Operations, Maintenance and Monitoring, Green Advisory, Requirements Gathering & Process Redesign

ICT in Media

- e.g. Digital Advertising/Digital Media Distribution

Infocomm Security

- e.g. Security Engineering, Security Management, Security Operations, Security Services

Infrastructure Architecture

Supported NICF Skill Areas

- **Areas eligible for Courses and Certification support level (Entry Level & Above)**

Infrastructure Support

- e.g. System Support, Technical Support

Next Generation Network (NGN)

- NGN Implementation & Deployment, NGN Operations & Maintenance, NGN Planning & Design

Product Management

- e.g. Developing Product and IP Strategy & roadmap; Software product management/architecturing; Product Release Management

Software Design & Development

- e.g. Application Support, Design, Development & Deployment, Quality Assurance, Requirement Gathering and Process Redesign, Testing

Supported NICF Skill Areas

- **Areas eligible for Courses and Certification support level (Entry Level & Above)**

Telecommunications Network Operations, Planning and Management

- e.g. Telecommunications Network Operations & Maintenance, Telecommunications Network Planning & Design, Telecommunications Radio Access Network Management, Telecommunications Wired Network Management

IT in Financial Services

- e.g. Development & Deployment, Information Management, Infrastructure Architecture, Requirement Gathering and Process Redesign

IT in Healthcare

- e.g. Health Informatics, Information Management, Information Technology – Application Support, Information Technology – Design, Information Technology – IT Management

Supported NICF Skill Areas

- **Areas eligible for Certification support only**

  (Entry Level & Above)

- **IT Management**
- **IT Outsourcing Management**
- **Portfolio Management (in ICT)**
- **Project Management (in ICT)**

NICF Course Mapping - Criteria

Types of Courses and Certification

- **Certifiable Programme**
  - Courses that lead to industry-recognised certifications
  - Appointment by Certificate Awarding Body (CAB)
  - Review on the Certification:
    - Certification Governing Body
    - Body of Knowledge & its currency
    - Certification Approach/Mechanism

Total Duration for Course and Exam Completion

- Minimum - 3 days / Maximum – 12 months

NICF Course Mapping - Criteria

Supporting documents to provide

- 1) Detailed **course curriculum and course materials** (incl. training and/or certification roadmap) – **4 sets**
- 2) Justification for course mapping - Demand for the selected job role & skill area)
- 3) Letter of authorisation from Certificate Awarding Body (if applicable)
- 4) Non-refundable administration fee of $600 per course, subject to 7% GST (Inclusive of Course Mapping with Endorsement application)

- *Please note that NICF Course Mapping is an independent process from CITREP+ course endorsement application.*
- *Courses and certifications that are accepted for mapping will be listed on NICF Portal (www.nicf.sg). The same course/certification has to meet the endorsement criteria if it is submitted for funding support. The course materials used for evaluation will not be returned to CP. The estimated processing duration is about 4-6 weeks from a complete submission.*

NICF Mapping Application

Course Mapping Application Submission

- NICF Mapping applications are submitted online via the Infocomm Competency Management System (ICMS):
  - https://eservice.imda.gov.sg/icms

- Please refer to the **ICMS Course Mapping and Endorsement User Guide** for the steps to submit the NICF Mapping application

NICF Course Mapping Application Fee

Payable to "**IMDA**" upon application

Course Mapping with Endorsement	**S$600 per course application (subject to 7% GST) Total Payable: S$642**
Course Endorsement	**S$350 per course application (subject to 7% GST) Total Payable: S$374.50**

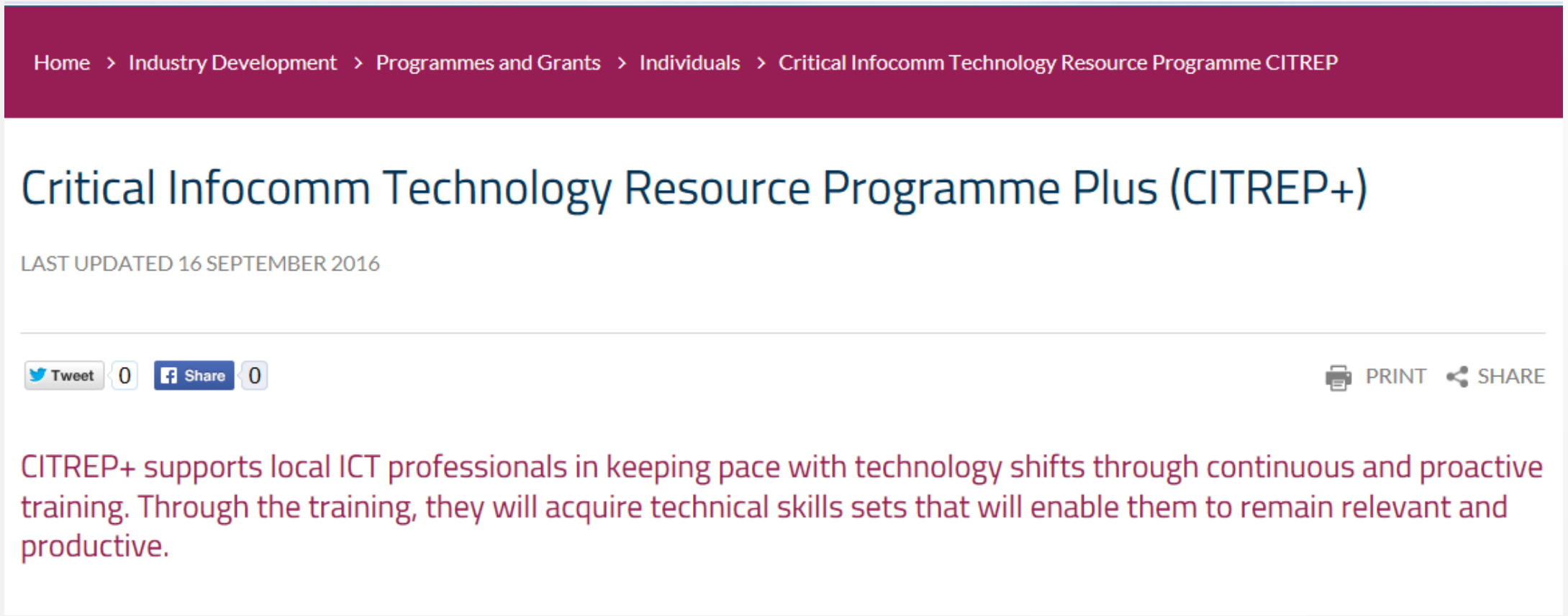
Please note:

For Course Mapping with Endorsement application, there will be no refund if no course endorsement application is submitted.

5

Steps to Obtain Job Roles and Competency Units (CUs)

CITREP Webpage (www.imda.gov.sg/citrep)



CITREP Webpage

Application Procedure

All course endorsement and claim applications must be submitted online via the online system known as Infocomm Competency Management System (ICMS).

Applicants must upload and attach the supporting documents via ICMS during the submission of online applications.

The sponsoring organisations and self-sponsored individuals must have a valid ICMS account to submit a CITREP+ claim. To apply for a new organisation or individual account, please click here.

All applicants must have their SingPass ID and password to access ICMS. To find out more and/or apply for SingPass, please click here.

To access ICMS, please click here.

To download CITREP+ guides, please click here.

Action: Select this to access CITREP Guide Page

Trainees

CITREP Guide Page

CITREP Guides

LAST UPDATED 05 AUGUST 2016

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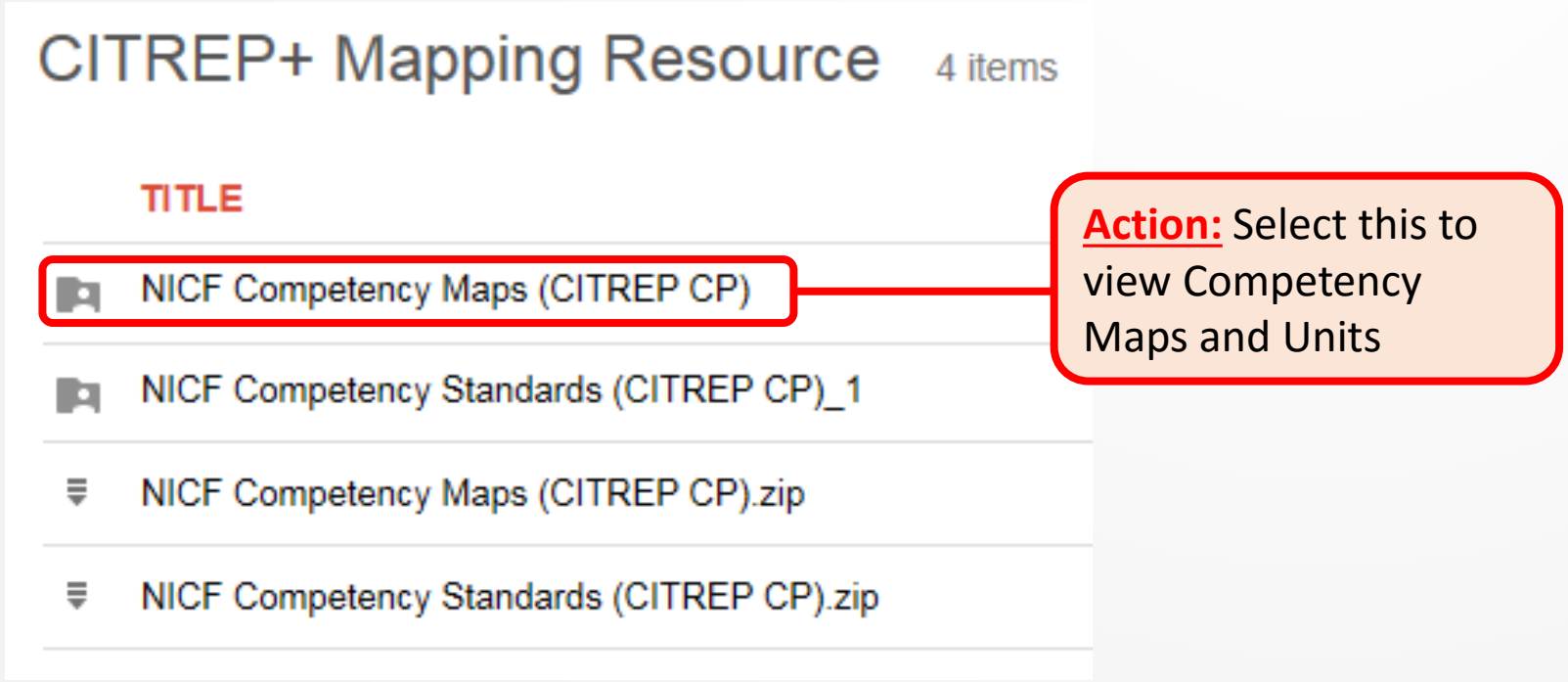
PRINT SHARE

Sponsoring Organisations & Individuals

- CITREP+ Claim Application Guide (1 April 2016 to 31 March 2017)

NICF Framework for CITREP+ Course Mapping



NICF Course Mapping

Step 1

Identify which NICF **skill area** that best fit your course in NICF*

(*Please refer to www.imda.gov.sg/CITREP

CITREP+ Guides: NICF Framework for CITREP+ Course Mapping for more information)

Select the most relevant **job role (s)** based on the identified skill area of your course

Course must be mapped to at least **2 relevant Competency Units (CUs)** for each NICF job role(s) selected **AND at least one of the required CU must be core** to the job role.

All approved new course mapping will be valid **till 31 March 2018**

Course Mapping Process

NICF Framework for CITREP+ Course Mapping

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Action: Identify the skill area that is most relevant to your course

CITREP+ Mapping Resource ›

TITLE

- Business Domains - Financial Services_Final.xlsx
- Business Domains - Healthcare_Final.xlsx
- Emerging Tech - Cloud Computing_Final.xlsx
- Emerging Tech - Enterprise Mobility_Final.xlsx
- Emerging Tech - Green ICT_Final.xlsx
- Horizontals - Business Analytics Big Data_Final.xlsx
- Horizontals - Infocomm Security_Final.xlsx
- Horizontals - IT Management_Final.xlsx
- Horizontals - Portfolio Mgt_Final.xlsx
- Horizontals - Product Mgt_Final.xlsx
- Horizontals - Project Management_Final.xlsx
- ICT in Media - Digital Advertising_Final.xlsx
- IT Services - Data Centre Mgt_Final.xlsx
- IT Services - Database Mgt_Final.xlsx
- IT Services - Infrastructure Architecture_Final.xlsx
- IT Services - Infrastructure Support_Final.xlsx
- IT Services - IT Outsourcing Mgt_Final.xlsx
- Software and Applications - Software Design and Developme...
- Telecomms and Networks - Enterprise Network Design and...
- Telecomms and Networks - NGN Planning Ops and Deploym...
- Telecomms and Networks - Telecomms Network Ops Plannin...

NICF Framework for CITREP+ Course Mapping

For example, Business Analytics

TITLE	LAST MODIFIED
Business Domains - Financial Services_Final.xlsx	Apr 18
Business Domains - Healthcare_Final.xlsx	Apr 18
Emerging Tech - Cloud Computing_Final.xlsx	Apr 18
Emerging Tech - Enterprise Mobility_Final.xlsx	
Emerging Tech - Green ICT_Final.xlsx	
Horizontals - Business Analytics Big Data_Final.xlsx	
Horizontals - Infocomm Security_Final.xlsx	
Horizontals - IT Management_Final.xlsx	Apr 18
Horizontals - Portfolio Mgt_Final.xlsx	Apr 18
Horizontals - Product Mgt_Final.xlsx	Apr 18
Horizontals - Project Management_Final.xlsx	Apr 18

Action: Overview of job families, job roles and corresponding competency units

NICF Course Mapping

INFO-COMMUNICATIONS MEDIA DEVELOPMENT AUTHORITY OF SINGAPORE

Step 2

Identify which NICF **skill area** that best fit your course in NICF*

(*Please refer to www.imda.gov.sg/CITREP

CITREP+ Guides: NICF Framework for CITREP+ Course Mapping for more information)

Select the most relevant **job role (s)** based on the identified skill area of your course

Course must be mapped to at least **2 relevant Competency Units (CUs)** for each NICF job role(s) selected **AND at least one of the required CU must be core** to the job role.

All approved new course mapping will be valid **till 31 March 2018**

NICF Framework for CITREP+ Course Mapping

Job Level	Job Role	Responsibilities	Competency Category	Competency Code	Competency Unit	Performance Statements
Expert / Management	Manager - Statistics and Mining	1. Work with the Information Technology team in setting up database and data warehouse for analytics 2. Define and implement testing methods to ensure statistical models achieve desired outcomes 3. Identify and deliver relevant analytics solutions to address key business needs and drive business growth 4. Present business proposal to the senior management to address key business needs and drive business growth 5. Provide guidance to the analysts on business problems / requirements 6. Evaluate new approaches, platforms or statistical methodology to improve the robustness of the analytics team	**Information Management**	**IT-DE-502S-1**	Design extract, transform and load (ETL) process	1. Analyse and identify the business requirements, the respective source data systems and data models in the organisation 2. Design staging databases to store the data temporarily before moving them into the target system 3. Design extraction process for consolidating data from multiple data source systems 4. Verify extracted data with business rules specified in target system 5. Design the process to transform extracted data into structures and data types that align to the business rules incorporated in the target system 6. Apply data analysis and data profiling to improve the clarity, quality and integrity of valid data to achieve the business requirements and needs of the organisation 7. Manage the integration of data into a unified interface 8. Develop load process to upload transformed and integrated data to live target system 9. Monitor and maintain the ETL process based on data changes over time and target system business requirements
				IT-IM-502S-2	Analyse report and trends	1. Assist senior management in the establishment of scope, policies and procedures for reporting the organisation's trend 2. Test reports generated by tools against source data to ensure accuracy and validity 3. Analyse trends and findings from reports and identify gaps and key issues, solutions and conclusion 4. Work with the relevant parties to address gaps and key issues highlighted in the reports 5. Define action and work plans to address gaps and key issues highlighted in the reports 6. Present proposed action work plans to senior management
			Statistics and Mining	**IT-STM-501S-1**	Evaluate testing methods for statistical model	1. Evaluate the statistical model's objectives and data available 2. Assess and select the appropriate testing method to validate the statistical model 3. Communicate the decision to the analysts developing the statistical model

Statistics & Mining | Text Analytics | Operations Research | Big Data Analytics

Action: Identify the relevant Job Family based on the selected skill area

NICF Framework for CITREP+ Course Mapping

To Note: Courses and certifications from Entrant and above as defined in NICF Occupation Levels may seek CITREP+ Endorsement.

Job Level	Job Role	Responsibilities	Competency Category	Competency Code	Competency Unit	Performance Statements
Expert / Management	Manager - Statistics and Mining	1. Work with the Information Technology team in setting up database and data warehouse for analytics 2. Define and implement testing methods to ensure statistical models achieve desired outcomes 3. Identify and deliver relevant analytics solutions to address key business needs and drive business growth 4. Present business proposal to the senior management to address key business needs and drive business growth 5. Provide guidance to the analysts on business problems / requirements 6. Evaluate new approaches, platforms or statistical methodology to improve the robustness of the analytics team	**Information Management**	**IT-DE-502S-1**	Design extract, transform and load (ETL) process	1. Analyse and identify the business requirements, the respective source data systems and data models in the organisation 2. Design staging databases to store the data temporarily before moving them into the target system 3. Design extraction process for consolidating data from multiple data source systems 4. Verify extracted data with business rules specified in target system 5. Design the process to transform extracted data into structures and data types that align to the business rules incorporated in the target system 6. Apply data analysis and data profiling to improve the clarity, quality and integrity of valid data to achieve the business requirements and needs of the organisation 7. Manage the integration of data into a unified interface 8. Develop load process to upload transformed and integrated data to live target system 9. Monitor and maintain the ETL process based on data changes over time and target system business requirements
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Action:

1. Review Responsibilities of Job Roles
2. Identify the relevant Job Roles

NICF Course Mapping

Step 3

Identify which NICF **skill area** that best fit your course in NICF*

(*Please refer to www.imda.gov.sg/CITREP

CITREP+ Guides: NICF Framework for CITREP+ Course Mapping for more information)

Select the most relevant **job role (s)** based on the identified skill area of your course

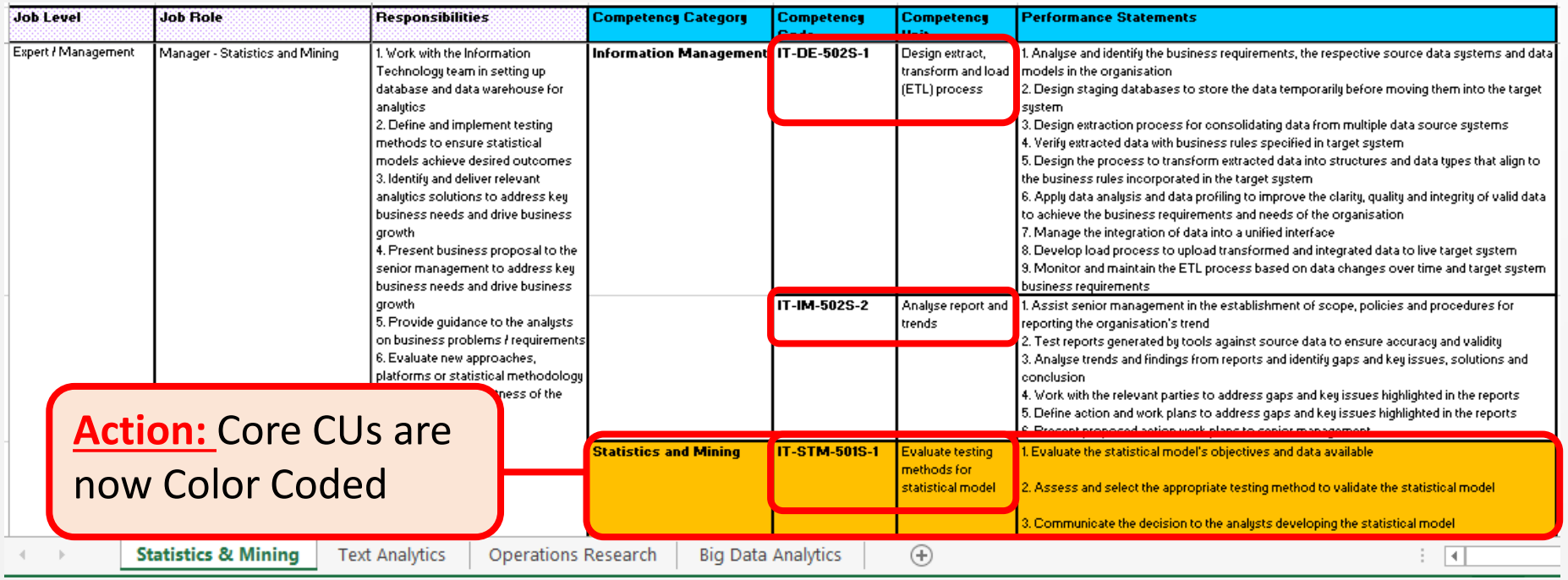
Course must be mapped to at least **2 relevant Competency Units (CUs)** for each NICF job role(s) selected **AND at least one of the required CU must be core** to the job role.

All approved new course mapping will be valid **till 31 March 2018**

Course Mapping Process

NICF Framework for CITREP+ Course Mapping

Action: Identify at least 2 competency units
To qualify for course and certification fee support, at least 1 CU must be **CORE** to the job role.



Job Level	Job Role	Responsibilities	Competency Category	Competency Code	Competency Unit	Performance Statements
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Statistics & Mining | Text Analytics | Operations Research | Big Data Analytics

Action: Core CUs are now Color Coded

To obtain a more detailed version of the competency units, please refer to Annex A at the end of the document

NICF Framework for CITREP+ Course Mapping

Job Level	Job Role	Responsibilities	Competency Category	Competency Code	Competency Unit	Performance Statements
Expert / Management	Manager - Statistics and Mining	1. Work with the Information Technology team in setting up database and data warehouse for analytics 2. Define and implement testing methods to ensure statistical models achieve desired outcomes 3. Identify and deliver relevant analytics solutions to address key business needs and drive business growth 4. Present business proposal to the senior management to address key business needs and drive business growth 5. Provide guidance to the analysts on business problems / requirements 6. Evaluate new approaches, platforms or statistical methodology to improve the robustness of the analytics team	**Information Management**	**IT-DE-502S-1**	Design extract, transform and load (ETL) process	1. Analyse and identify the business requirements, the respective source data systems and data models in the organisation 2. Design staging databases to store the data temporarily before moving them into the target system 3. Design extraction process for consolidating data from multiple data source systems 4. Verify extracted data with business rules specified in target system 5. Design the process to transform extracted data into structures and data types that align to the business rules incorporated in the target system 6. Apply data analysis and data profiling to improve the clarity, quality and integrity of valid data to achieve the business requirements and needs of the organisation 7. Manage the integration of data into a unified interface 8. Develop load process to upload transformed and integrated data to live target system 9. Monitor and maintain the ETL process based on data changes over time and target system business requirements
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			Statistics and Mining	**IT-STM-501S-1**	Evaluate te methods fo statistical r	

Statistics & Mining | Text Analytics | Operations Research | Big Data Analytics

Action: Ensure Performance Statements are fully mapped to Course Objective

NICF Course Mapping

INFO-COMMUNICATIONS MEDIA DEVELOPMENT AUTHORITY OF SINGAPORE

- New Application

Alternatively, you may refer to the ICMS navigation guide below to complete your NEW submission:

Submit NICF Course Mapping via ICMS

- Login as **CP AO**
- Go to **Course/Certification Endorsement**
- Click the square button **New Application**
- Select Programme For Submission: **NICF Course Mapping**
- Proceed with the necessary info and mapping matrix
- **Submit for Approval** the application for CP AA's approval

Note : The system will generate a new Ref ID number
(e.g. NICF/0913/CE/YYYYMM/00XXXX)

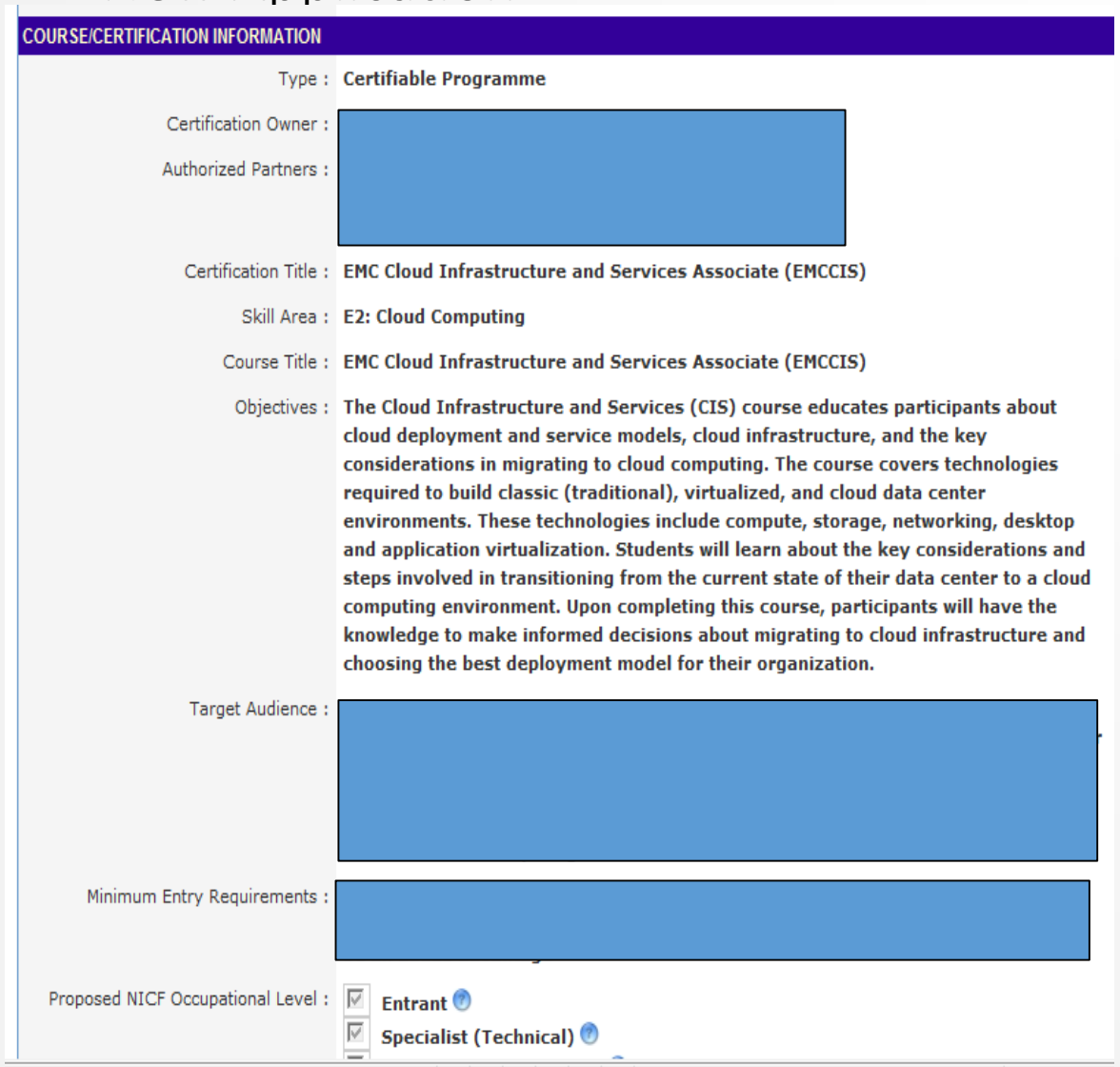
Submit/apply NICF COURSE MAPPING APPLICATION IN ICMS

- Login as **CP AA**
- Click on **Items Pending for Your Action**
- Review the application details submitted by CP AO
- Click on **Approve** button to submit for IDA's processing

Note : The system will generate the same Ref ID number
(e.g. NICF/0913/CE/YYYYMM/00XXXX)

NICF Course Mapping

- New Application



COURSE/CERTIFICATION INFORMATION

Type : **Certifiable Programme**

Certification Owner :

Authorized Partners :

Certification Title : **EMC Cloud Infrastructure and Services Associate (EMCCIS)**

Skill Area : **E2: Cloud Computing**

Course Title : **EMC Cloud Infrastructure and Services Associate (EMCCIS)**

Objectives : **The Cloud Infrastructure and Services (CIS) course educates participants about cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. The course covers technologies required to build classic (traditional), virtualized, and cloud data center environments. These technologies include compute, storage, networking, desktop and application virtualization. Students will learn about the key considerations and steps involved in transitioning from the current state of their data center to a cloud computing environment. Upon completing this course, participants will have the knowledge to make informed decisions about migrating to cloud infrastructure and choosing the best deployment model for their organization.**

Target Audience :

Minimum Entry Requirements :

Proposed NICF Occupational Level : ☑ **Entrant** ☑ **Specialist (Technical)**

Submit NICF Course Mapping via ICMS

Sample Submission in ICMS:

COURSE / CERTIFICATION INFORMATION

NICF Course Mapping

- New Application

TRAINING ROADMAP

CORE MODULES

Total No. of Core Modules :	1	Min. No. of Core Modules Completed :	1

S/N	CORE MODULE TITLE	DURATION
1.	EMC Cloud Infrastructure and Services Associate (EMCCIS)	5.0 Days

ELECTIVE MODULES

Total No. of Elective Modules :	0	Min. No. of Elective Modules Completed :	

S/N	ELECTIVE MODULE TITLE	DURATION

CERTIFICATION ROADMAP

CORE MODULES

Total No. of Core Modules :	0	Min. No. of Core Modules Completed :	

S/N	CORE MODULE TITLE	DURATION

ELECTIVE MODULES

Total No. of Elective Modules :	0	Min. No. of Elective Modules Completed :	

S/N	ELECTIVE MODULE TITLE	DURATION

Submit NICF Course Mapping via ICMS

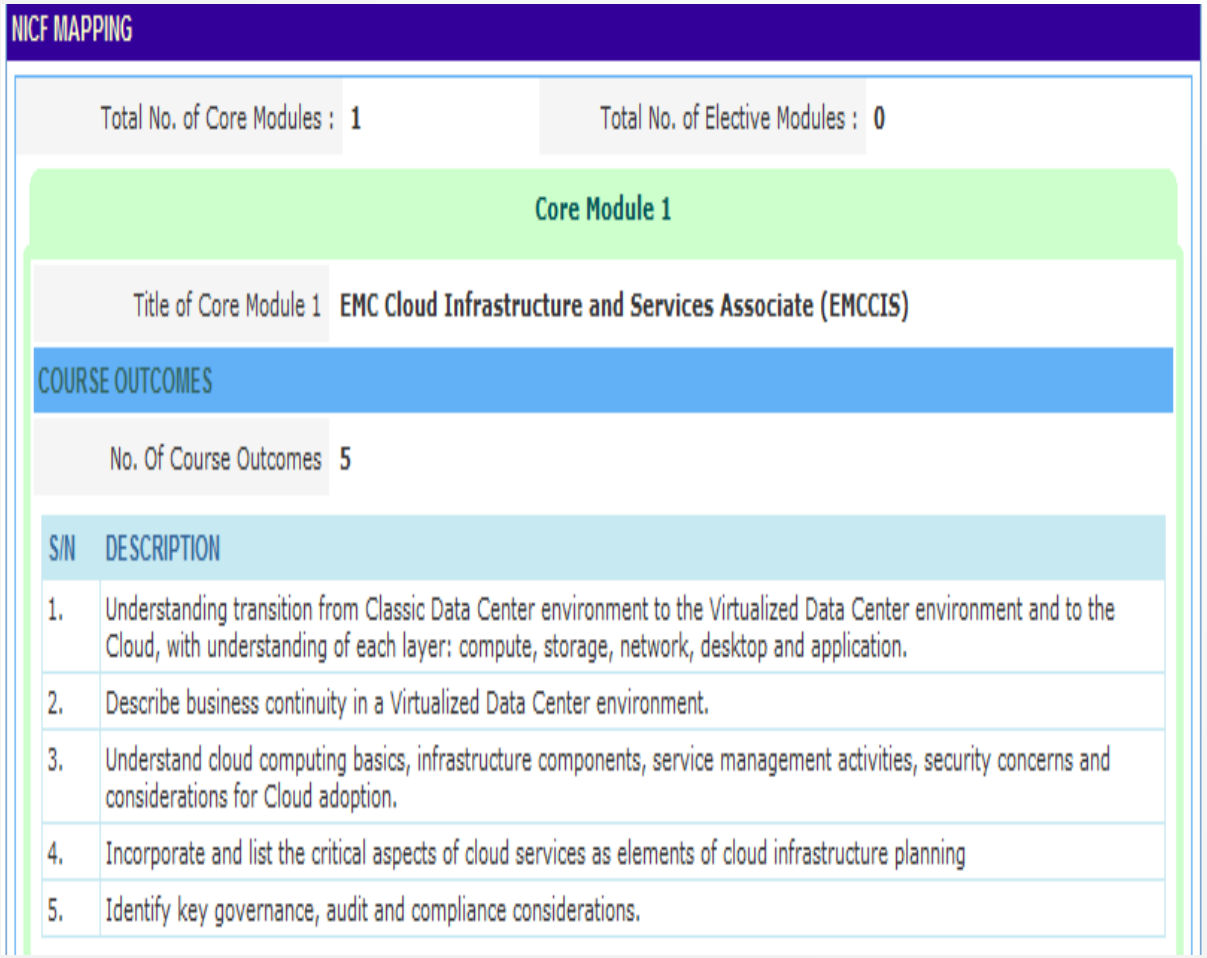
Sample Submission in ICMS:

TRAINING ROAPMAP

NICF Course Mapping

- New Application

Submit NICF Course Mapping via ICMS



NICF MAPPING

Total No. of Core Modules : 1

Total No. of Elective Modules : 0

Core Module 1

Title of Core Module 1: EMC Cloud Infrastructure and Services Associate (EMCCIS)

COURSE OUTCOMES

No. Of Course Outcomes: 5

S/N	DESCRIPTION
1.	Understanding transition from Classic Data Center environment to the Virtualized Data Center environment and to the Cloud, with understanding of each layer: compute, storage, network, desktop and application.
2.	Describe business continuity in a Virtualized Data Center environment.
3.	Understand cloud computing basics, infrastructure components, service management activities, security concerns and considerations for Cloud adoption.
4.	Incorporate and list the critical aspects of cloud services as elements of cloud infrastructure planning
5.	Identify key governance, audit and compliance considerations.

Sample Submission in ICMS:

COURSE OUTCOMES

NICF Course Mapping

- New Application

Submit NICF Course Mapping via ICMS

PROPOSED COMPETENCY UNITS(CU) & COMPETENCY ELEMENTS (CE)/PERFORMANCE STATEMENTS (PS)	
No. of Competency Units	2
CU CODES & CE/PS	
1. IT-CLG-401S-1 :	Apply knowledge of cloud legal, regulatory and security requirements
IT-CLG-401S-1-E1	Identify relevant legal, regulatory and security requirements for the cloud environment
IT-CLG-401S-1-E2	Evaluate impact of legal, regulatory and security requirements to the cloud environment
IT-CLG-401S-1-E3	Develop action plans to incorporate the relevant requirements into the organisation's processes and systems where applicable
IT-CLG-401S-1-E4	Update organisational policies and procedures to align to relevant legal, regulatory and security requirements
IT-CLG-401S-1-E5	Incorporate cloud environment policies and procedures with relevant legal, regulatory and security requirements and governance guidelines
IT-CLG-401S-1-E6	Communicate legal, regulatory and security requirements to the relevant internal teams and third parties
IT-CLG-401S-1-E7	Escalate instances of non-compliance to management according to organisational procedures
2. IT-CLE-405S-1 :	Apply knowledge of cloud computing models and technologies
IT-CLE-405S-1-E1	Identify cloud computing models and technologies relevant to area of work
IT-CLE-405S-1-E2	Apply knowledge of cloud computing models and characteristics
IT-CLE-405S-1-E3	Apply knowledge of cloud computing technologies

Sample Submission in ICMS:

PROPOSED CU & CE/PS

NICF Course Mapping

- New Application

Submit NICF Course Mapping via ICMS

INFO-COMMUNICATIONS MEDIA DEVELOPMENT AUTHORITY OF SINGAPORE

Sample Submission in ICMS:

COURSE MAPPING MATRIX

COURSE MAPPING MATRIX

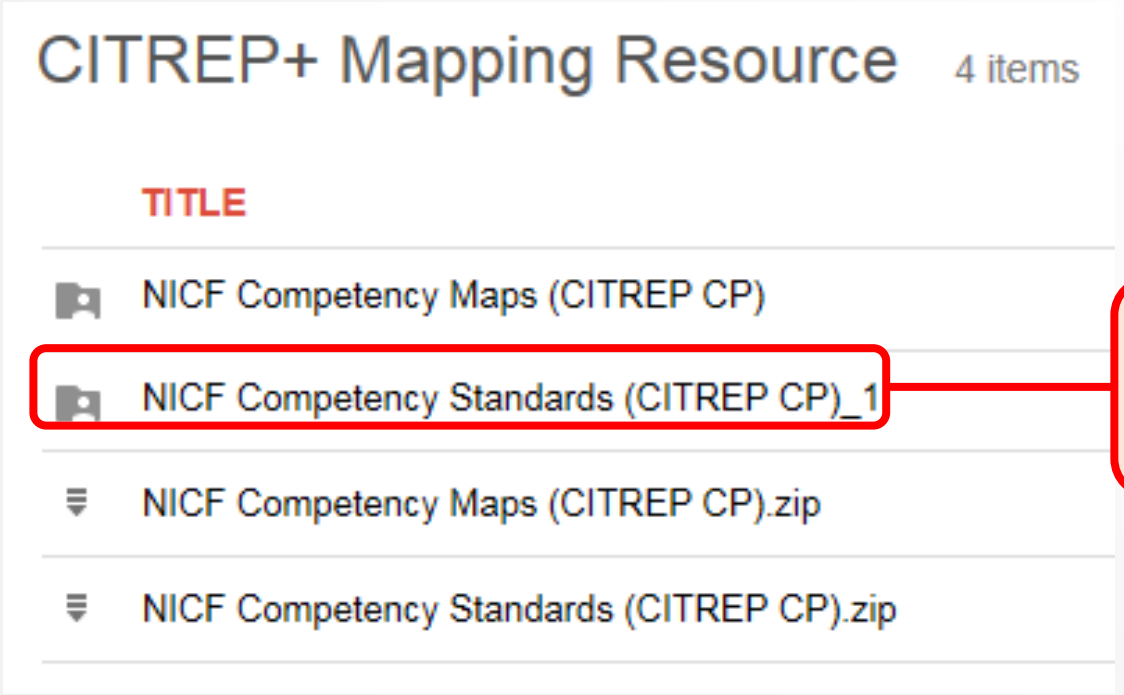
Competency Units & Elements/Performance Statements		Course Outcomes				
CU Code	CE	1	2	3	4	5
IT-CLG-401S-1	IT-CLG-401S-1-E1	☐	☐	☐	☐	☑
	IT-CLG-401S-1-E2	☐	☐	☐	☐	☑
	IT-CLG-401S-1-E3	☐	☐	☐	☑	☐
	IT-CLG-401S-1-E4	☐	☐	☐	☐	☑
	IT-CLG-401S-1-E5	☐	☐	☐	☐	☑
	IT-CLG-401S-1-E6	☐	☐	☐	☐	☑
	IT-CLG-401S-1-E7	☐	☐	☐	☐	☑
IT-CLE-405S-1	IT-CLE-405S-1-E1	☑	☑	☑	☑	☐
	IT-CLE-405S-1-E2	☐	☐	☑	☑	☐
	IT-CLE-405S-1-E3	☐	☐	☑	☑	☐

Annex A:
Detailed Competency Units

- To obtain detailed versions of the Competency Units, you may refer to the next few slides on steps to retrieve it.

NICF Standard Documents

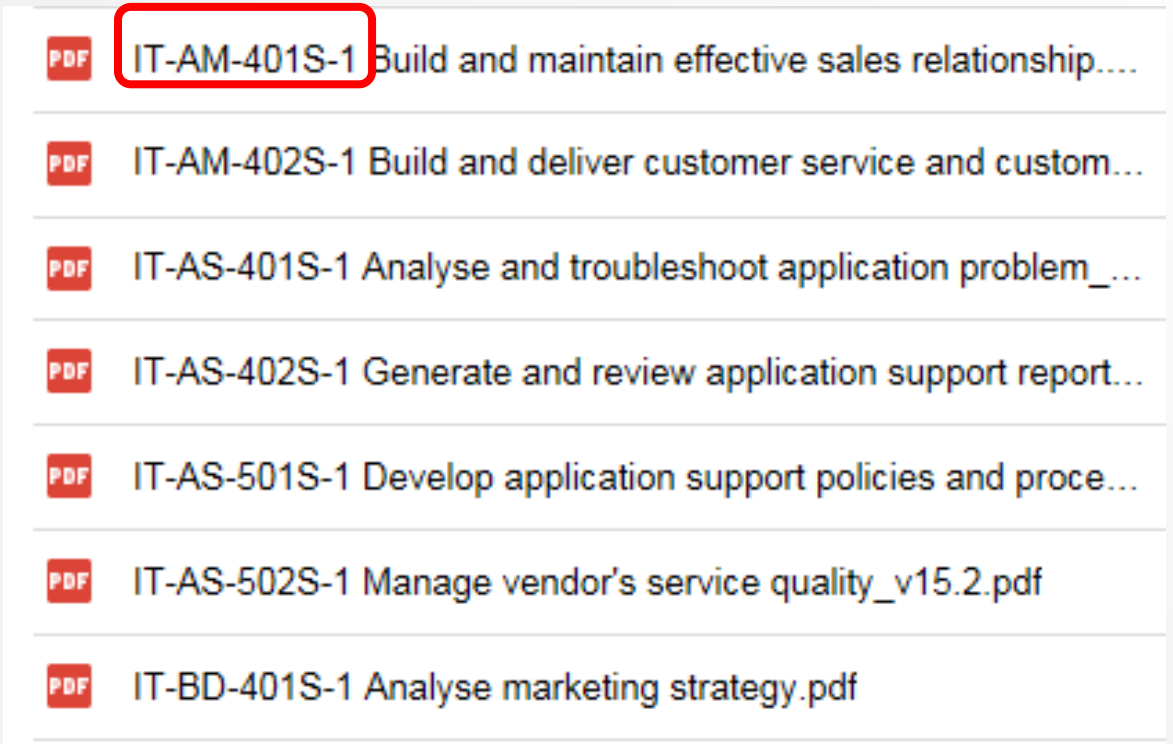
From the **NICF Framework for CITREP+ Course Mapping**



Action: Select this to view Detailed Version of Competency Units

NICF Standard Documents

Action: Search Competency Units by Competency Code



NICF Standard Documents

Sample of Detailed Competency Units

SINGAPORE WORKFORCE SKILLS QUALIFICATIONS

NATIONAL COMPETENCY STANDARD

Framework	:	National Infocomm Competency Framework
Competency Category	:	Big Data Analytics
Competency Code	:	IT-BDA-302S-1
Competency Unit	:	Prepare data for big data analytics
Competency Descriptor	:	The unit defines the competency to ingest and prepare the data for big data analytics. It involves reviewing the data requirements, ingesting and cleansing the data required for the analytics projects.
Complexity Level	:	3 (Entrant level)
Credit Value	:	3
Version Number	:	1
Effective Date	:	2013
Review Date	:	NA
Developer	:	WDA & IDA
Custodian	:	WDA & IDA

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SINGAPORE WORKFORCE SKILLS QUALIFICATIONS

National Competency Standard

Competency Unit Code	Complexity Level
IT-BDA-302S-1	3 (Entrant level)
Competency Unit Title	
Prepare data for big data analytics	

Relevant Job Roles/Occupations

The job role(s) / occupations that this unit would be relevant to may include:

Specialist (Technical)
- Big Data Analyst

Assumed Skills and Knowledge

Knowledge and skills that the individual should preferably have to confidently undertake the unit and to be successful subsequently on the job

Learners are assumed to:

1. Possess basic knowledge of big data technology and programming language
2. Possess knowledge on databases and SQL
3. Possess knowledge on design extract, transform and load (ETL) process
4. Be aware of the data governance policies in the organisation

Performance Statements

The critical aspects of job performance, stating the evaluative criterion and expected outcome of tasks

A competent individual must be able to successfully perform the following:

1. Review the data requirements required for the *analytics project*
2. Ingest data from different *data sources* into the *analytics platform* using the *tools / programming language*
3. *Cleanse and transform* the data according to the data requirements to support the *analytics project*
4. Resolve and follow up with any issues arising during the data preparation