

# Contract Management Claim System

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PROG6212 - POE PART 3

# What is CMCS

CMCS is a system made to assist in accurate and dependable financial payout of any given workforce, in this case an educational institution. The system is designed in such a way that allows employees to continuously add and manage the work that they have done for that month and have an expected payout for the work that they have accomplished. This system is just as useful to management as now they have a convenient way to keep track of and ensure the validity of each employee as they would be expected to ke3p track of their work. Allowing for a smoothing working experience for both employee and employer.

The screenshot shows the CMCS software interface. At the top, there is a blue header bar with the CMCS logo, navigation links for 'My Claims', 'Review Queue', and 'HR View', and a user account section for 'manager@demo.test'. Below the header is a summary section with the title 'My Claims'. It displays three key metrics: 'Total Claims (Filtered)' at 12, 'Total Hours' at 74,0, and 'Total Amount' at R 19 522,00. To the right of these metrics is a 'Status Breakdown' button showing 'Approved: 7', 'Pending: 3', and 'Rejected: 2'. Below this summary is a filter section with dropdowns for 'Status' (set to 'All'), 'Year' (set to 'All'), and 'Month' (set to 'All'), along with 'Filter' and 'Clear' buttons. The main content area is titled 'Claims' and contains a table listing 12 individual claims. Each row includes columns for 'Period', 'Module', 'Total Amount', and 'Status'. The 'Status' column uses color-coded buttons: green for Approved, red for Rejected, and black for Draft. Each row also features an 'Open' button on the far right. The table footer indicates the data is from '© 2025 - CMCS · Privacy'.

Period	Module	Total Amount	Status	Action
08/2026	CHOCO3441	R 4 780,00	Approved	<span>Open</span>
11/2025	Neha1325	R 750,00	Approved	<span>Open</span>
11/2025	Neha1234	R 2 200,00	Approved	<span>Open</span>
11/2025	PROG6212	R 2 750,00	Rejected	<span>Open</span>
10/2025	TEST1236	R 4 542,00	Approved	<span>Open</span>
10/2025	TEST1235	R 1 000,00	Approved	<span>Open</span>
10/2025	TEST1235	R 1 000,00	Rejected	<span>Open</span>
10/2025	TEST1234	R 100,00	Draft	<span>Open</span>
10/2025	PROG6212	R 0,00	Approved	<span>Open</span>
10/2025	LEGO3242	R 0,00	Draft	<span>Open</span>
10/2025	SIMN2213	R 0,00	Draft	<span>Open</span>
10/2025	CLDV5212	R 2 400,00	Approved	<span>Open</span>

# Why Use CMCS

- **Streamlines lecturer claims**  
Eliminates paperwork and manual submissions with a fast, digital claim process.
- **Improves accuracy & transparency**  
Automated calculations, approval tracking, and status visibility reduce errors and confusion.
- **Clear approval workflow**  
Lecturer → Programme Coordinator → Academic Manager → HR  
Ensures every claim is properly reviewed and authorised.
- **Secure and role-based access**  
Protects data by giving each user only the permissions they need.

- **Centralised data storage**  
All claims, documents, and history stored in one system for easy retrieval and auditing.
- **Faster HR processing**  
HR dashboard summarises claim activity by lecturer, month, and workload.
- **Better accountability**  
Status logs and action history help trace who made decisions and when.
- **Time saving for all departments**  
Reduces admin load and speeds up approval & payment timelines.

# How To Use CMCS

**Lecturers:** They are able to create claim for that given month for the work they have accomplished. They can specify on which days, the hours and the rate at which they worked on that given day as well as upload any documentation to support their claim.

**Coordinator:** They can begin the review process for any submitted claim and either approve or deny the claim as a suggestion to the manager.

**Manager:** The manager acts as the final say for any claim, either approving or denying them once they are in the review process. They can download any documentation uploaded and check the specifics of each claim – this functionality applies to the coordinator as well.

**HR:** HR is given fully approved claims and can ensure that the data associated with them is correct. They are given a full rundown of the total amount needed for that month's payout as well as all view rights given to the manager – this is also given to the manager.

# Workflow of CMCS

The lecturer would create a claim for that month. Adding any necessary details and documentation, this can be done throughout the month as until submitted the claim is saved as a draft.

The coordinator logs in and may check for any submitted claims that month, they may decide to begin the review process on that claim and decide whether to suggest approval or denial for said claim.

The manager logs in and can see any "Under Review" claims that they may need to approve or deny, all information about that specific claim is provided to them.

Finally, HR can see the total amount of approved claims, the necessary payout and details of each individual approved claim.

CMCS My Claims

Claim 11/2025

Line Items

Date	Hours	Rate	Amount	Notes
2025/11/26	6,0	R 365,00	R 2 190,00	Lesson on the care and treatment of domestic animals
2025/11/27	4,0	R 225,00	R 900,00	Lesson on the care and treatment of domestic animals
<b>Total</b>	<b>R 3 090,00</b>			

Summary

Lecturer: Neha  
Module: Neha1325  
Period: 11/2025

Status Timeline

No history yet.

CMCS My Claims - Review Queue

Claim 11/2025

Coordinator Approved

Line Items

Date	Hours	Rate	Amount	Notes
2025/11/26	6,0	R 365,00	R 2 190,00	Lesson on the care and treatment of domestic animals
2025/11/27	4,0	R 225,00	R 900,00	Lesson on the care and treatment of domestic animals
<b>Total</b>	<b>R 3 090,00</b>			

Summary

Lecturer: Neha  
Module: Neha1325  
Period: 11/2025

Status Timeline

- Coordinator Approved: 2025/11/21 22:30:40 by coordinator@demo.test
- Under Review: 2025/11/21 22:39:51 by coordinator@demo.test
- Submitted: 2025/11/21 22:28:56 by lecture@demo.test
- Draft: 2025/11/21 22:28:56 by lecture@demo.test
- Submitted: 2025/11/21 22:28:54 by lecture@demo.test

CMCS My Claims - Review Queue

Claim 11/2025

Under Review

Line Items

Date	Hours	Rate	Amount	Notes
2025/11/26	6,0	R 365,00	R 2 190,00	Lesson on the care and treatment of domestic animals
2025/11/27	4,0	R 225,00	R 900,00	Lesson on the care and treatment of domestic animals
<b>Total</b>	<b>R 3 090,00</b>			

Upload Supporting Documents

Choose file: No file chosen Allowed: pdf, docx, xlsx – 10MB max

Book 2.xlsx 10 KB • 2025/11/21 22:27:42

ISO7211.pdf 543 KB • 2025/11/21 22:27:53

Summary

Lecturer: Neha  
Module: Neha1325  
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Status Timeline

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CMCS My Claims - Review Queue

HR Claims Summary

TOTAL APPROVED AMOUNT: R 15 562,00

TOTAL HOURS: 48,0

NUMBER OF CLAIMS: 5

Filter

Year: All Month: All

Approved claims by lecturer & period

Lecturer	Period	Claims	Total Hours	Total Amount
Chocolate	11/2025	1	16,0	R 4 800,00
Jerome	11/2025	1	4,0	R 2 400,00
Neha	11/2025	2	16,0	R 3 840,00
test3	11/2025	1	12,0	R 4 542,00
<b>Totals</b>		<b>5</b>	<b>48,0</b>	<b>R 15 562,00</b>

# Technology Used in Creation

## Backend & Framework

- **ASP.NET Core MVC**  
Provides a powerful, scalable framework for building the web application and handling the full MVC architecture.
- **C#**  
Main programming language used for controllers, business logic, and model management.

## Database & Data Access

- **Entity Framework Core**  
Used for ORM mapping, migrations, and secure communication with the database.
- **MSSQL**  
Lightweight relational database used for claim data, user roles, and Identity storage.

## Frontend & UI

- **Razor Views**  
Used to dynamically generate HTML and bind data to the UI.
- **Bootstrap 5 / Bootswatch (Cosmo Theme)**  
Provides a modern, responsive, and professionally styled user interface.
- **Bootstrap Icons**  
Adds visual clarity to actions such as approve, reject, upload, delete, and navigation.

## Development Tools

- **Visual Studio 2022**  
IDE used for development, debugging, scaffolding, and unit testing.
- **xUnit & Moq**  
Frameworks used for automated unit tests ensuring code correctness and reliability.

## Authentication & Security

- **ASP.NET Core Identity**  
Handles user accounts, login, registration, roles (Lecturer, Coordinator, Manager, HR), and authentication.

## File Management

- **IWebHostEnvironment**  
Used to store and manage uploaded supporting documents securely in the wwwroot/uploads directory.

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Thank You