EUROPEAN COMMISSION
Community Research

SEVENTH FRAMEWORK PROGRAMME

CINCH

CINCH-II

(Project Number: 605173)

DELIVERABLE D1.6

Laboratory and calculation exercise database available from NucWik

Lead Beneficiary: **UiO**

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Project Coordinator: Jan John

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Version control table

Version number	Date of issue	Author(s)	Brief description of changes made
1.0	19/06/2014	Jon Petter Omtvedt	First version
1.1	19/06/2014	M. Stilijanova	MST check
1.2	04/12/2014	J. John	Coordinators comments addressed

Relevance

This deliverable contributes to the following Work-Packages and Tasks:

☐ ALL

WP 1
☐ Task 1.1 ☒ Task 1.2 ☐ Task 1.3 ☐ Task 1.4

WP 2
☐ Task 2.1 ☐ Task 2.2 ☐ Task 2.3 ☐ Task 2.4

WP 3
☐ Task 3.1 ☐ Task 3.2 ☐ Task 3.3 ☐ Task 3.4 ☐ Task 3.5

WP 4
☐ Task 4.1 ☐ Task 4.2 ☐ Task 4.3 ☐ Task 4.4

WP 5
☐ Task 5.1 ☐ Task 5.2 ☐ Task 5.3 ☐ Task 5.4

Project information

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EXECUTIVE SUMMARY

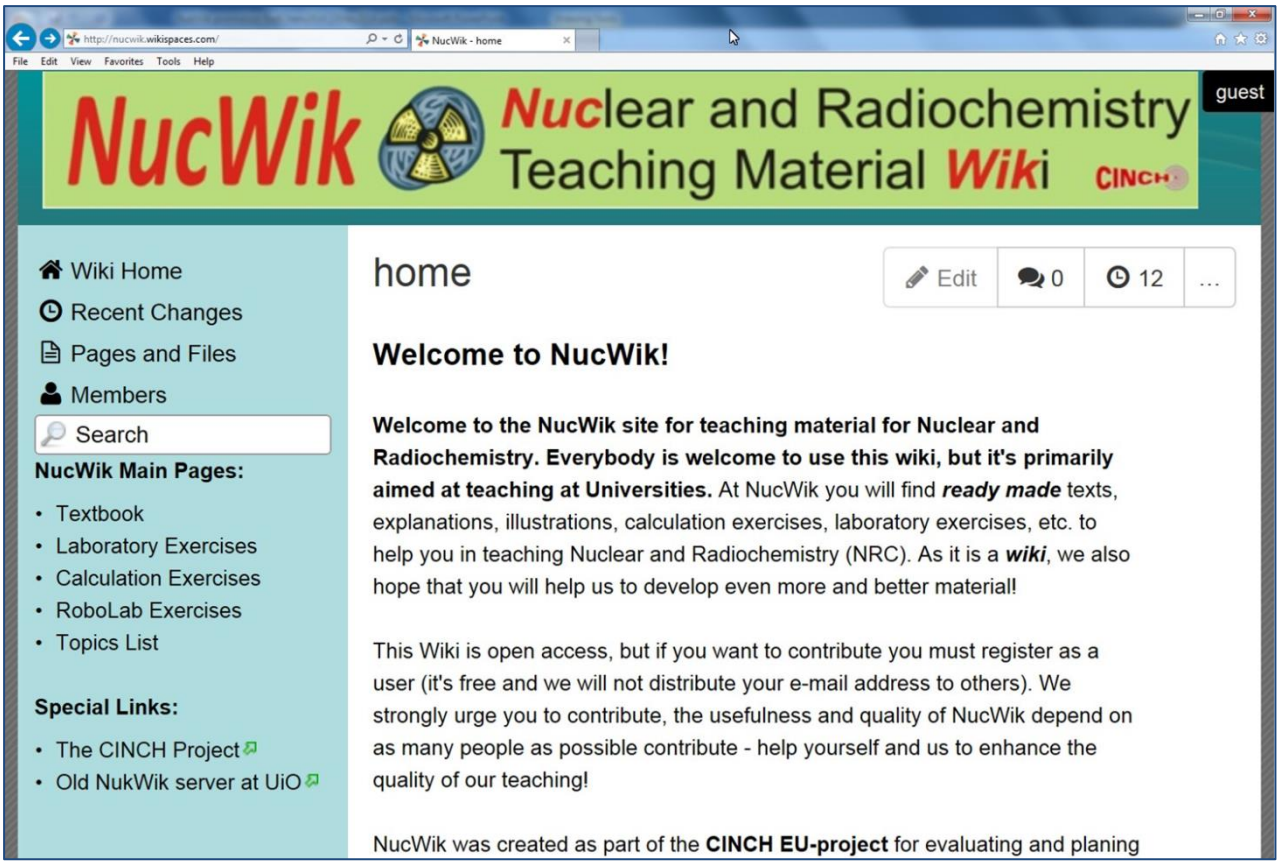
The NucWik wiki database (http://nucwik.wikispaces.com/) was established as Deliverable 3.1 of WP3 of the CINCH-II project. To demonstrate NucWik's potential and intended use, examples of calculation and laboratory exercises have been uploaded to NucWik – this constitutes Deliverable 1.6.

CONTENT

1 INTRODUCTION

The NucWik wiki database (http://nucwik.wikispaces.com/) was established as Deliverable 3.1 of WP3 of the CINCH-II project. To demonstrate NucWik's potential and intended use, examples of calculation and laboratory exercises has been uploaded to NucWik – this constitute Deliverable 1.6.

The welcome page of NucWik is shown below:



This deliverable (1.6) has uploaded examples of teaching material under submenu "Laboratory Exercises" and "Calculation Exercises". Details of the uploaded material are provided in the chapters below.

NucWik is an "open source" and freely available database (wiki), there is no restrictions on reading rights. However, to upload material users have to register. In this way the author of all NucWik material will be known. Readers who discovers errors or want to give feedback can however do this through the discussion page that are associated to each NucWik document/page. It is not necessary to be a registered user in order to write on the discussion pages.

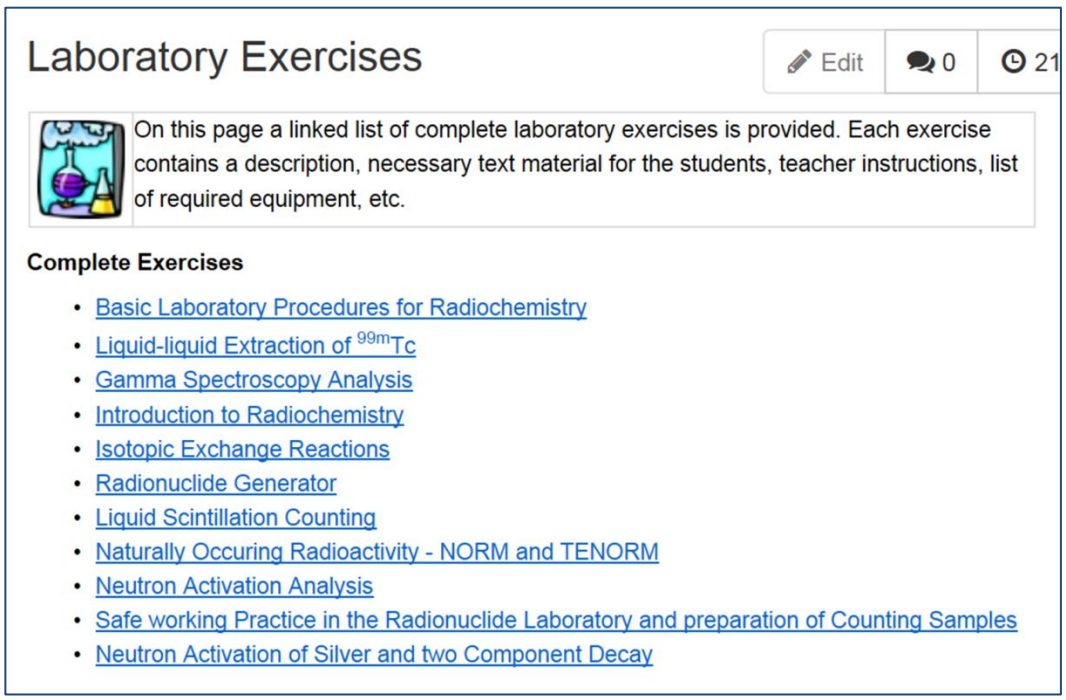
In order to have some method of quality control and thus be able to guarantee that given documents (e.g. exercises) meet a basic standard and contains scientifically accurate material, a review system needs to be implemented. For NucWik this is done by having two different types of documents:

- basic documents written by anyone who has been granted write-access rights and
- "CINCH approved" documents which has been peer reviewed.

A group of peer reviewers (both from within and outside the CINCH collaboration) will be put together to review selected or submitted pages for "CINCH approval". So far, no documents have reached a stage where CINCH approval has been granted. This will be done during the upcoming months where we promote NucWik, train and enlist users, etc.

1.1 Uploaded Laboratory Exercises

Laboratory exercises, based on teaching material available from UiO courses, were uploaded, as listed in the screen shot below – in total 11 different exercises.



The completeness of material is varying, e.g. teacher instructions still need to be written for many of the exercises. However, as an example on how to use the Wiki the material is very suitable and the missing parts will be used to illustrate how NucWik can be used for shared development and collaborative work. In the planed training courses (based on Deliverable 4.3) we will seek to enlist users that can contribute to completing the listed exercises and contribute with new ones.

1.2 Uploaded Calculation Exercises

Calculation exercises, again based on teaching material from UiO courses, were uploaded in a similar way as the Laboratory Exercises mentioned in the previous chapter. The exercises are currently grouped according to the following subjects:

Exercises with the Chart of Nuclides
Exercises Mother Daughter Relations and Equilibrium
Exercises with Amount of Radioactive Material (number of nuclei, number of moles, weight) and the Law of Radioactive Decay
Exercises with Mass, Binding Energy and the Liquid Drop Model
Exercises with Particles and Nuclear Reactions
Exercises with Fission and Nuclear Reactors
Exercises with Radiation Dosage and Radiation Protection

All exercises have complete solution sets (provided in a separate document).

2 CONCLUSIONS

As intended for Deliverable 1.6 (WP1 task 2), sufficient laboratory and calculation exercises were uploaded to NucWik to demonstrate the usefulness and purpose of NucWik.