



Deploying SPOCs in a University Institution with Open edX: What Do We Need?

OPEN EDX CONFERENCE October 12-13 th 2015 | Wellesley, MA

6 Courses:



UC3Mx IT.1.1x

Introduction to Programming with Java - Part 1: Starting to Program in Java

Starting Soon April 2015



UC3Mx HGA.1x

Educación para una sociedad del conocimiento

Current

February 24, 2015



UC3Mx PCA.1x

DOCUMENTARY! New Trends, New Formats | DOCUMENTAL! Nuevas tendencias, nuevos

Current

February 17, 2015

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Explaining European Paintings, 1400 to 1800

Current February 10, 2015



UC3Mx CEH.1-ESx

Descubriendo la pintura europea de 1400 a 1800

Current

February 10, 2015



UC3Mx MMC.1x

Caer o No caer. El secreto de las estructuras.

Current

February 3, 2015



The beginnings

- In 1995 we started using multimedia content in the teaching
 - Mbone/ Vídeoconference (H.323) & Streaming.
 - Collaborative tools.
 - Recording rooms.
 - Auto recording classroom
 - Several publishing portals.







- We started in late 2012.
- 3 courses under "teaching innovation program"

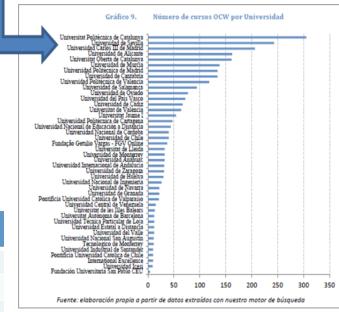
Cursos0: UC3M platform

Moodle + Khan Academy Software SSO between Moodle & Khan We customize the platform and gamification

	2012	2013	2014
Videos	26	77	82
Exercises	36	116	114
Professors	10	33	35
Students	96	640	697

OCW - UC3M offers 209 courses in 29 categories

Year	Proposals	Published courses	Awards	Finalists
2008	61	43	1	-
2009	38	34	-	-
2010	48	30	-	2
2011	57	38	1	2
2012	47	20	3	2
2013	43	18	1	3
2014	35			
TOTAL	329	193	6	9





New Environment

Changes are observed in educational models

These changes involve to apply ICT to teaching

New terms start appearing like "flipped classroom", hybrid pedagogies, MOOCs, SPOCs,....



Institutional Implications

- Teaching.
- University services.
- New multimedia formats.
- New recordings rooms.
- New educational platforms (beyond LMS).





Changes...





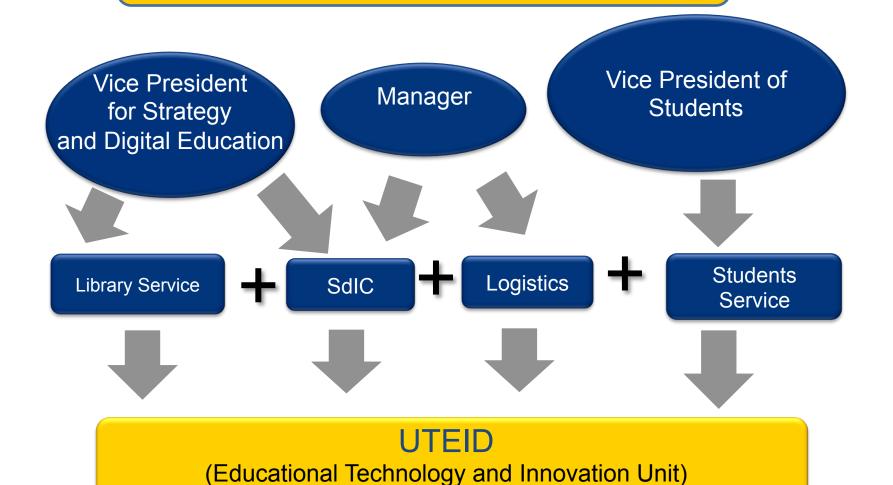
The Change....and evolution



New institutional unit

Multidisciplinary unit consisting of several areas of knowledge (http://www.uc3m.es/uteid)

6/11/2012





UTEID: What do we do?

Planing and design

Preliminary meetings: What do you want to do?

Syllabus (Introduction, goals, Staff, Structure, Evaluation)

Help make a planning for the generation of educational resources



Seminars and information about support tools and platform. Demo Course UC3Mx

Advice and ongoing support through regular meetings

Follow up

Deadline

Quality control and verification

Final meetings: release dates, roles of people involve in the course...





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UC3M Digital

Under this name we unify access to the various actvities of digital education









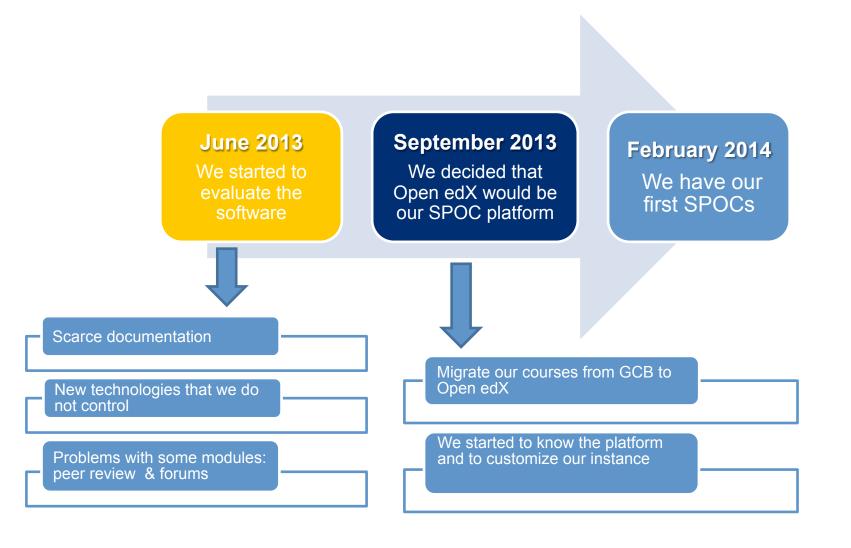


UC3M Digital – Open edX





UC3M Open edX progression





UC3M Open edX: New services, new tools

Our requirements

Registration and Authentication

SPOCs creation to support teaching on campus

Adapt an open platform to a controlled environment

Registration and authentication mechanism

Classroom group control and privileges of each user Creation and Content Management

Management all the content generated by professors

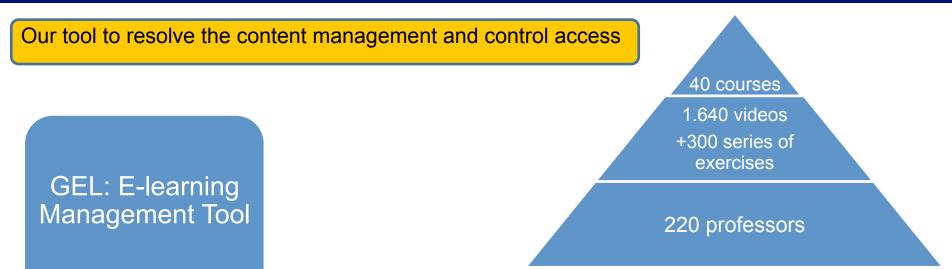
Control of material across-platforms and courses

Publishing all this material under institutional portal

We needed development a tool to support all of this







- Web application.
- Publication of courses regardless of platform (Open edX, MiriadaX, GCB, ...).
- Tagging of the elements which belong to each course: videos, pdf, exercises, etc.
- Location of all these elements within the course structure
- Publication of the videos on YouTube and our own streaming server automatically
- Management of users and groups
- Logfile of system activitie (who does what)
- Integration with the automatic transcription and translation system





GEL & Open edX

We are optimizing GEL to use it with Open edX incorporating new features

Export the course

- Course configuration elements (syllabus, about page, different users roles)
- Course tree structure
- Videos + subtittles
- Documents

New front-end + login application

- LDAP auth with our institutional credentials
- Manages the entire registration process in the platform
- Manages the different SPOCs types that we have
- Open edX roles support
- · Visibility of the courses according to the students profile



Authentication system



Logging application: UC3M development

LDAP
Validation

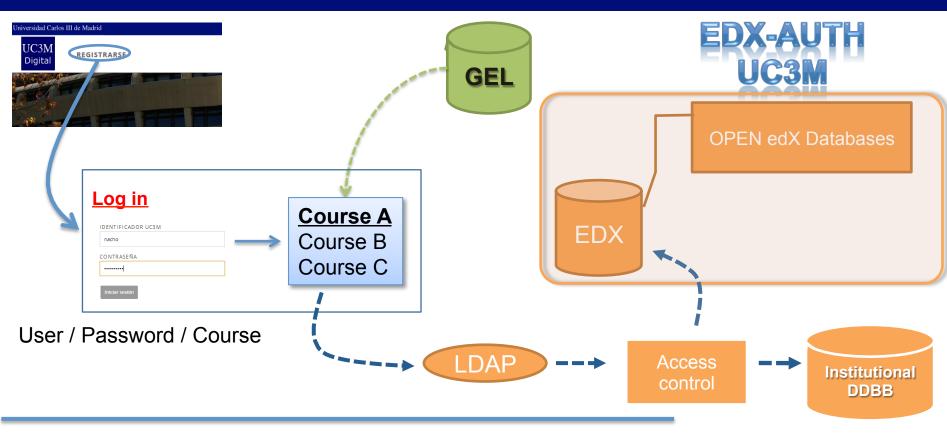
Course Selection Enrollment Open edX DDBB

- Management from GEL:
 - o Massive load students (.csv file)
 - "Cursos0"
 - o Students control via WebService
 - "CursosB" and "CursosR"





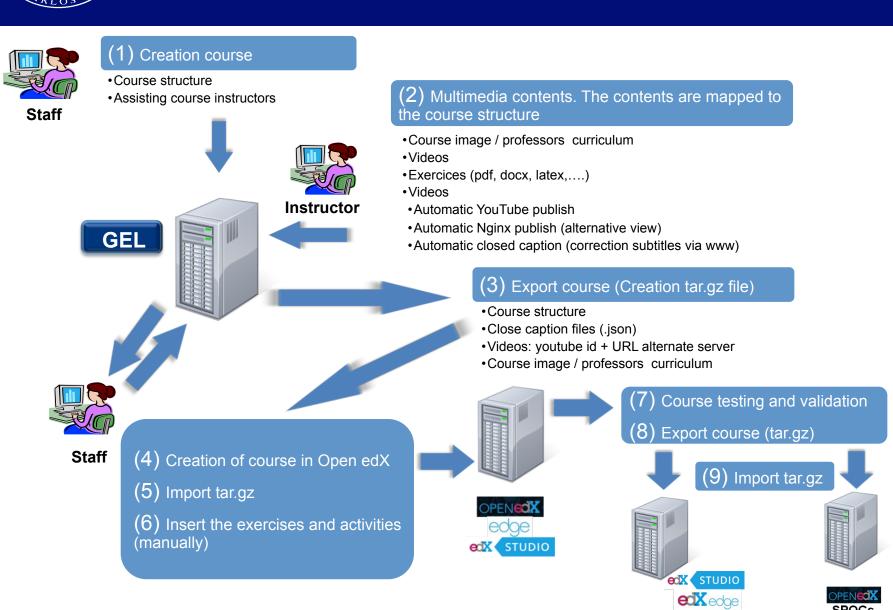
Open edX Logging process





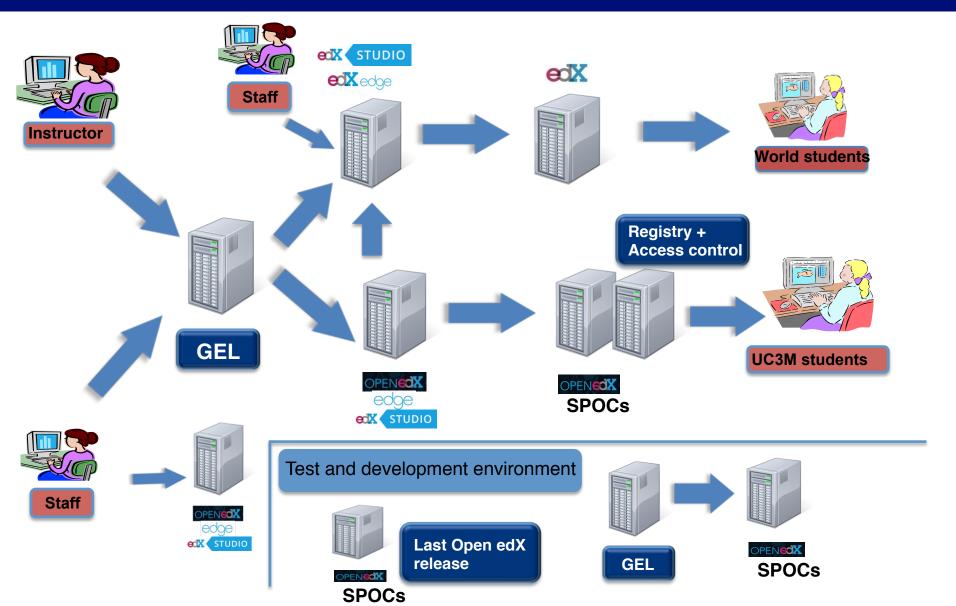


Open edX (SPOCs) & UC3Mx (MOOCs): workflow





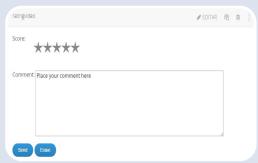
OPEN edX & UC3Mx: Topology

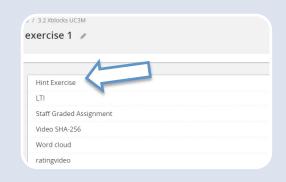




xblocks







Quiz video

- Based on Paella Player
- Import SCORM file
- Log file with all activity

Rating video

- YouTube ID
- Comments
- All activity external DDBB (all data accessible from GEL)

Numerical input with hints

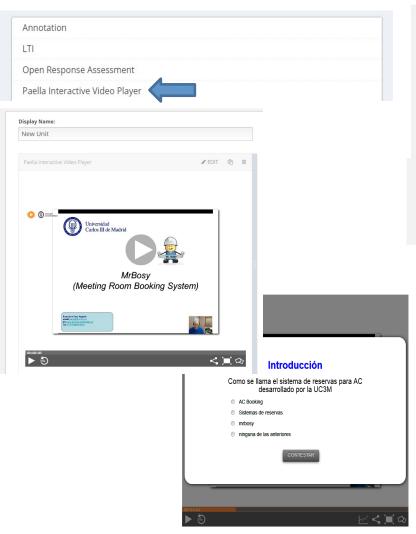
- It supports variables and formulas.
- Configurable number of hints.
- Max retries
- % error allow

https://github.com/UC3Mx/ratingXBlock



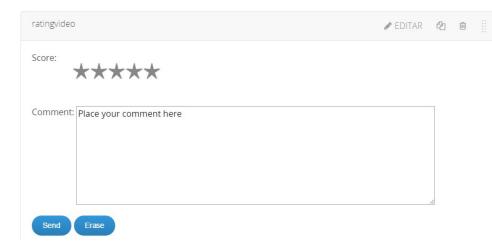
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In-video quiz



Video rating





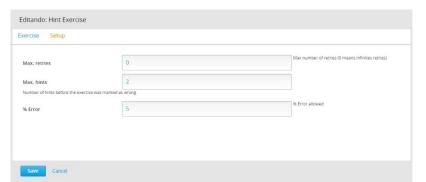


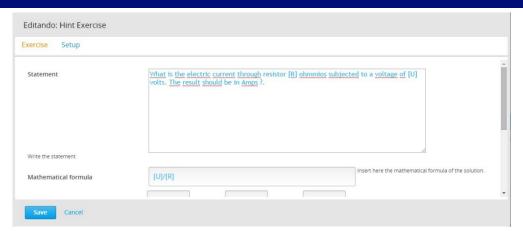
xblocks

Numerical input hints











Semana 1				
Semana 2	•	В	٥	b
Semana 3			VER LA	UNIDAD EN STUDIO
3.1 Ejemplos de Videos	What is the electri should be in Amp	c current through resistor 180.0 ohmmio: s ?.	s subjected to a voltage of 91.0 volt	s. The result
3.2 Xblocks UC3M				
3.3 SGA	Hint 1: Pista 1			
Semana 4	Hint 2: Pista 2			
	3	Check Hint Wrong solution		
		4 >		







UC3M Digital courses:



UC3M SPOCs educational offers

0-Courses (Blended)

 Levelling courses for incoming students applying a flipped classroom model

B-Courses (Blended)

 Course is taugth in parallel with a subject applying a flipped classroom model

R-Courses

 Remedial courses for certain subjects

SPOC educational offer 2015/16

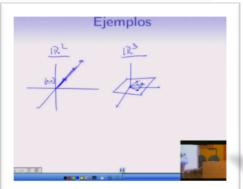
- Structural mechanics (4ª edition) B-Course
- Introduction to regenerative medicine and tissue engineering (3^a edition) B-Course
- How far the machines can see? (2ª edition) B-Course
- Java B-Course
- Vocabularies and semantic schemes B-Course
- Physics R-Course
- Algebra R-Course
- Physics R-Course
- Chemistry 0-Course
- Math 0-Course



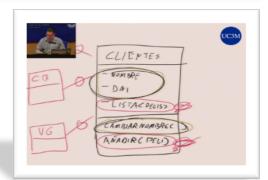
Educational contents: videos

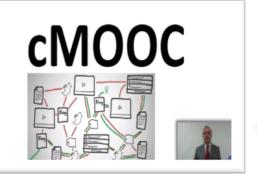






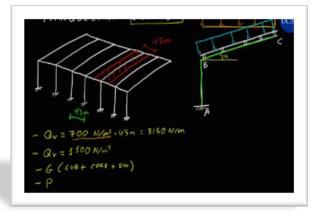














Multimedia recording rooms I

2 HD Chroma Recording Studios

- 2 cameras
- Teleprompter
- Video editing table
- Codifier
- Tablet/iPad





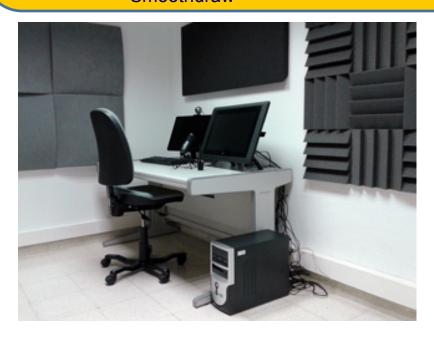


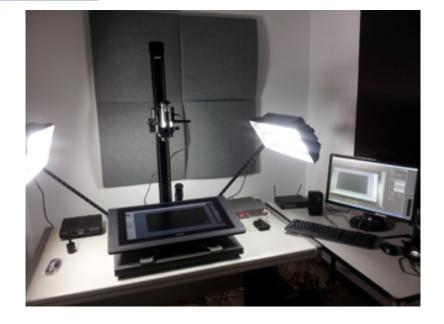


Multimedia recording rooms II

- 4 self-recording studios with the next equipment:
 - Interactive graphics tablet wacom 22"
 - HD overhead camera for the tablet
 - Professional microphone
 - Video capture and editing software:
 - Camtasia
 - Adobe premier
 - Smoothdraw









Educational contents: Problems

AUTOEVALUACIÓN DEL MÓDULO 1 (10 points possible)				
Responde a las siguientes cuestiones:				
1. En un procesamiento histológico, la fijación tiene como objeto				
 Hacer el tejido más consistente Aumentar la presión osmótica en el tejido para obtener un corte mas homogéneo 				
Preservar las estructuras de los tejidos y evitar su degradación Quitar la parafina de los tejidos				
2. El epitelio:				
Tiene abundante sustancia intercelular el tejido más consistente				
Tiene moderada cantidad de sustancia intercelular				
O No tiene vasos sanguíneos				
O No está polarizado				
3. Las unidades funcionales de los epitelios glandulares:				
Las unidades unicelulares				
C Las unidades tubulares				
C Los acinos y alveolos				
Todas las anteriores son correctas				
4. El hueso es:				
Cartílago calcificado				
O Un tejido conectivo especializado				
O Un tejido epitelial especializado				
O Un tejido no vascularizado				
5. El tejido conectivo:				
Tiene sustancia intercelular escasa				

Which piece of furniture is built for sitting? □ a table □ a desk □ a chair □ a bookshelf Which of the following are musical instruments? ✓ □ a piano □ a tree □ a guitar □ a window	What col	or is the open ocean on a sunny day?
 □ a desk □ a chair □ a bookshelf Which of the following are musical instruments? ✓ ☑ a piano □ a tree ☑ a guitar 	Which pi	ece of furniture is built for sitting?
 ② a chair ◇ a bookshelf Which of the following are musical instruments? ✓ ② a piano □ a tree ☑ a guitar 		a table
 ■ a bookshelf Which of the following are musical instruments? ✓ a piano □ a tree ☑ a guitar 		a desk
Which of the following are musical instruments? ✓ ② a piano □ a tree ② a guitar		🤋 a chair 💙
✓		a bookshelf
a tree a guitar	Which of	the following are musical instruments?
☑ a guitar	✓ [🗷 a piano
		a tree
a window		🗹 a guitar
	[a window
Check	Check	

EJERCICIO 1 (1 point possible)

La ecuación de un movimiento es $\vec{r}=(4t^2+6t+5)\vec{i}$. Calcular la aceleración.

a) $\vec{a}=(4)\vec{i}$ b) $\vec{a}=(6)\vec{i}$ c) $\vec{a}=(8)\vec{i}$ d) $\vec{a}=(5)\vec{i}$



Educational contents: Problems

TEXT INPUT (1/1 points)

Here's a very simple example of a text input question. Depending on the c special text requirements for dates, case sensitivity, etc.

Which country contains Paris as its capital?

France

Check

Show Answer(s)

Marca en el cuadro donde está el caballo





Some edX courses ask you to enter an algebraic expression as an answer. Try entering the algebraic expression in the box below. It's easier than it looks.

$$A \cdot x^2 + \sqrt{y}$$

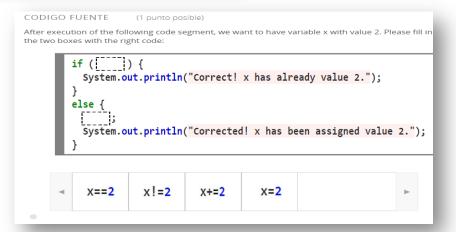
The entry is case sensitive. The product must be indicated with an asterisk, and the expocaret, so you would write " $A*x^2 + sqrt(y)$ ".



Check

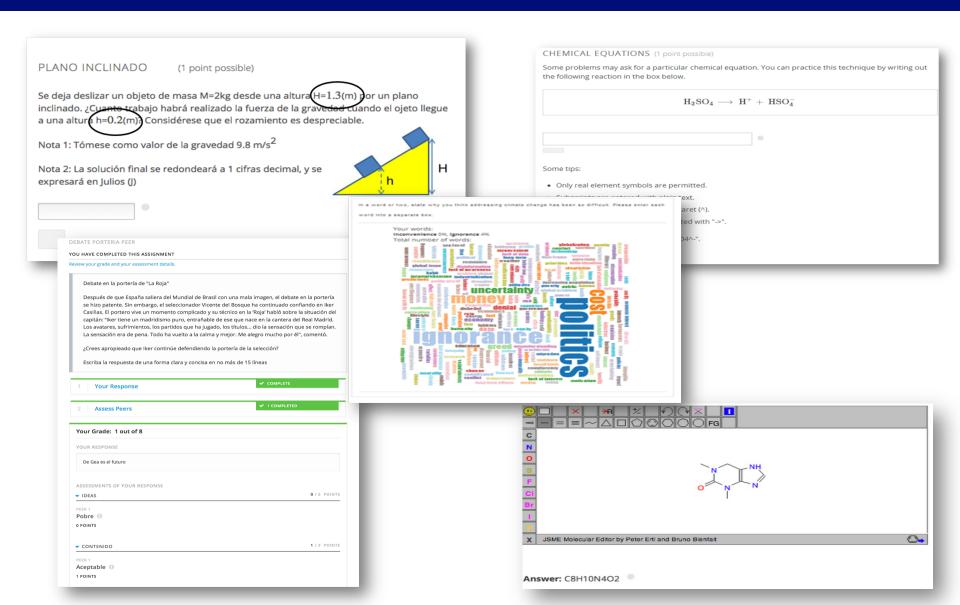
Show Answer(s)





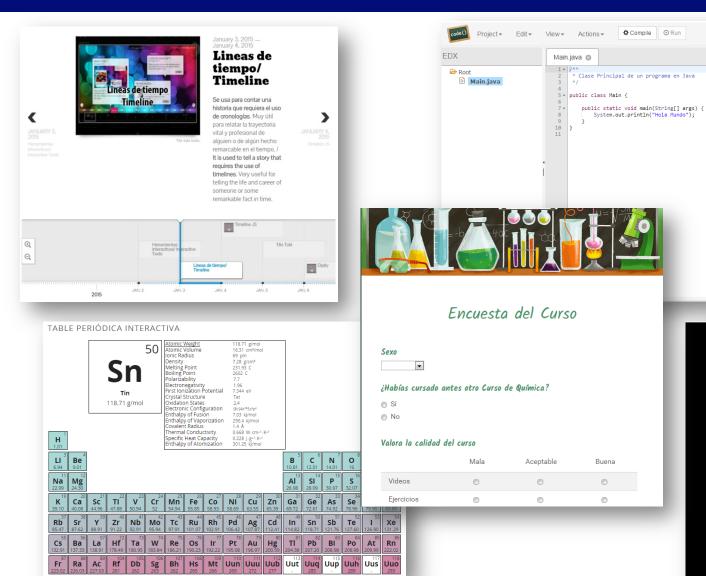


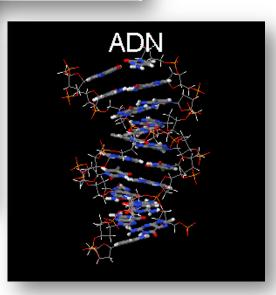
Educational contents: Problems





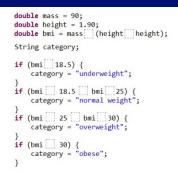
Educational contents: Support material







Educational contents: support material



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Sobreponer instrucciones en la página







Empezar

Sección Una

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TABLA PERIÓDICA

Descubre los siguientes "elementos químicos" de la tabla periódica.







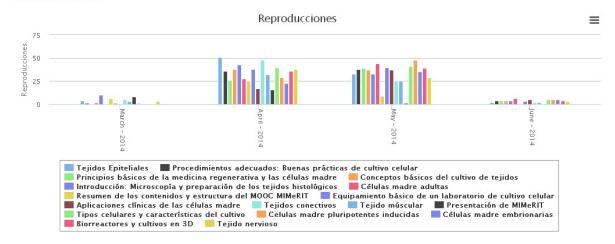
En este segundo paso bla,bla

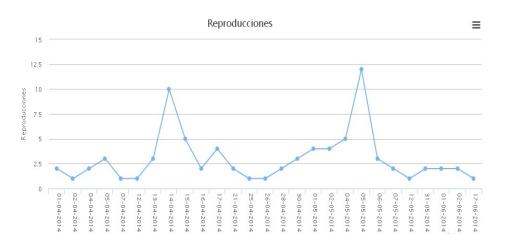
← Back Next →



Some activity analytics embedded in GEL

Estadísticas del curso





▲ Visto en UC3M	Visto fuera de UC3M	Visto	Veces visto
0.00 %	100.00 %	•	1
100.00 %	0.00 %	•	3
0.00 %	100.00 %	•	2
0.00 %	100.00 %	•	1
0.00 %	100.00 %	•	1
33.33 %	66.67 %	•	3
0.00 %	100.00 %	•	1
0.00 %	100.00 %	•	3
0.00 %	100.00 %	•	2
50.00 %	50.00 %	•	2
0.00 %	100.00 %	•	1
0.00 %	100.00 %	•	3



Future Works: what are we doing?

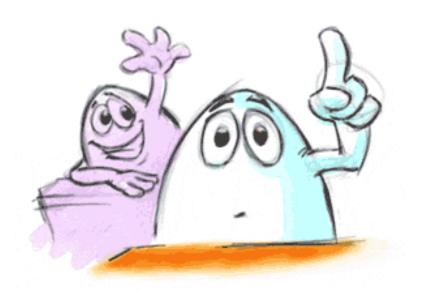
- We will continue adding new features related to Open edX to GEL
 - Administration dashboard to check the current global status of the platform and courses
 - o Course structure and contents (beta)
 - o start/end date in a subsection level
 - o Open/closed courses (calendar/table)

Xblocks

 Auth and private VOD and live (using Wowza media streaming server)



Questions?



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