



Clock Hour: Time to Learn

Seconds : Minutes : Hours

Origin of Time

The mathematician and **astronomer Theodosius** of Bithynia (ca. 160 **BCE**-ca. 100 **BCE**) is said to have invented a universal sundial that could be used anywhere on Earth. The **Romans** adopted the Greek sundials, and the first record of a sun-dial in Rome is 293 BC according to Pliny.



Origin of Time

An hourglass keeping track of elapsed time. The hourglass was one of the earlier timekeeping devices and has become a symbol of the concept of time



Origin of Time

The **first mechanical clock** was made in 723 A.D. by a monk and mathematician I-Hsing. It was an astronomical **clock** and he called it the "Water Driven Spherical Birds-Eye-View Map of The Heavens."



Origin of Time

A **pendulum clock** is a [clock](#) that uses a [pendulum](#), a swinging weight, as its [timekeeping](#) element. The advantage of a pendulum for timekeeping is that it is a [harmonic oscillator](#); it swings back and forth in a precise time interval dependent on its length, and resists swinging at other rates. From its invention in 1656 by [Christiaan Huygens](#) until the 1930s, the pendulum clock was the world's most precise timekeeper, accounting for its widespread use.



Time is Money!!!



What is Controlled by Time?



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What is Controlled by Time?



And of Course..... Education!!



Carnegie Unit (Clockhours)

- If you earned a high school diploma, or a certificate from a technical school, or any degree from any college or university in the United States, you served your time. You probably received grades for your performance, passed a variety of tests and exams, and hopefully learned something useful. But one thing is nearly certain: your progress through school or college was measured by the Carnegie Unit.
- More commonly known in higher education as the “credit hour,” the Carnegie Unit is the standard time-based metric of student progress used by almost every K-12 and higher education system in the nation. The number of units and credits is not the same everywhere but the formula is simply and routinely applied: a certain number of hours equal a unit, a certain number of units equal a credit, and a certain number of credits produce some sort of credential or degree.

Why is the Process Necessary?

- To determine the number of credit hours student may earn in a course?
- To know what is required of students in a course?
- To know what is expected of a faculty member in a course?
- To measure time taken to complete a course activity?
- To be difficult?

Is there a Magic Formula?

- Glad you asked, and yes there is a magic formula!!
- One hour in-course work + 2 hours out-of-course work is the building block of the Carnegie Unit.
- One credit hour = 15 in-course hours + 30 out-of-course hours.
- Thus, a 3 credit hour course = 45 in-course hours + 90 out-of-course hours.
- Question is how do you calculate the in-course and out-of-course hours?
- Again, glad you asked!



Clock Hour Document Elements

Assessments

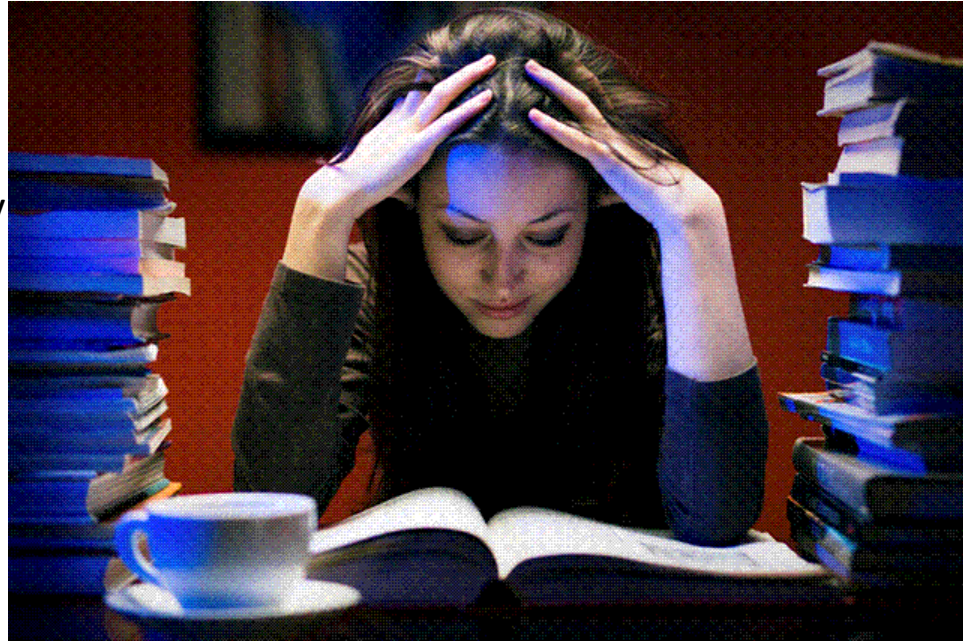
- Multiple Choice
- Ordering
- True/False
- Short Answer Essay
- Short Essay
- Regular Essay
- Matching

Final Exams



Clock Hour Document Elements

- Assignments
 - Case Study
 - Article Critique
 - Annotated Bibliography
 - Article Review
 - Literature Review
 - Problem Solving
 - Scholarly Activity
 - Speech
 - PowerPoint
 - Research Paper
 - Problem Solving



Clock Hour Document Elements

- Standard Elements
 - Reading Announcements
 - Reading Email
 - Reviewing Syllabus
 - Reviewing Feedback
 - Watching Videos
 - Viewing Lectures
 - Communicating with Faculty
 - Reading and Note Taking



What Do All of These Have in Common?

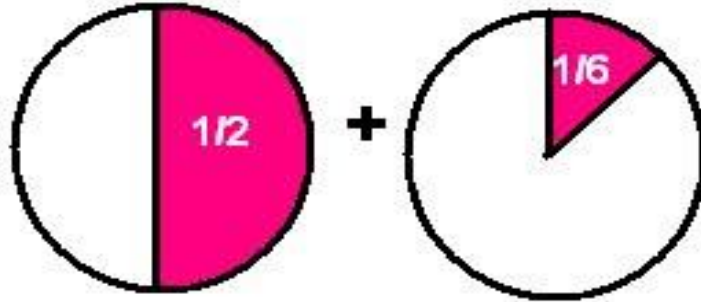
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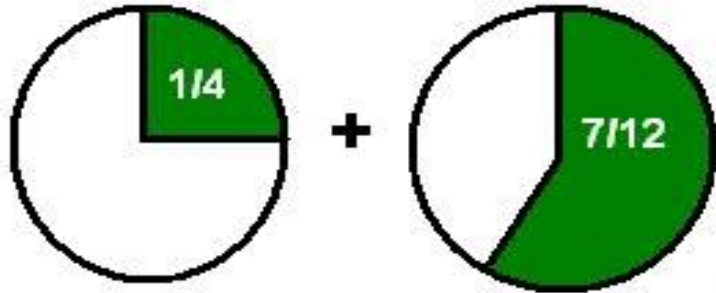
Minutes to be Exact!

- Minutes per:

- Page
- Number of words
- Per Week
- Per Unit
- Per Speech
- Per Course
- Per Slide
- Per Question
- Per Item



**30 mins +
10 mins =
40 mins.**



**15 mins +
35 mins =
50 mins .**

↑
larger .

How Do We Account for Time?

Through a customized Clock Hour Document, here on the right, and on the pass out we have provided.

Undergraduate				
Course:		Date:		Reviewer:
Activity	Course Component	Current Estimated Time	Units of Measure	Frequency
Academic Engagement	Assessment: Multiple Choice Qualitative	5	Minutes	Per Question
Academic Engagement	Assessment: Multiple Choice Quantitative (e.g. Calculation) Associate	3	Minutes	Per Question
	Bachelor	7	Minutes	Per Question
Academic Engagement	Assessment: Ordering Associate	5	Minutes	Per Item
	Bachelor	9	Minutes	Per Item
Academic Engagement	Assessment: True/False	5	Minutes	Per Question
Academic Engagement	Assessment: Hot Spot	5	Minutes	Per Question
		8	Minutes	Per Question
Academic Engagement	Assessment: Short Answer (Required to Show Calculations) Associate			
	Bachelor	16	Minutes	Per Question
Academic Engagement	Assessment: Short Answer (No Word Requirement)	8	Minutes	Per Question
Academic Engagement	Assessment: Short Answer (Written Response)	30	Minutes	Per 75 Words
Academic Engagement	Assessment: Short Essay (Written Response)	80	Minutes	Per 200 Words
Academic Engagement	Assessment: Short Essay (Written Response)	120	Minutes	Per 300 Words
Academic Engagement	Assessment: Short Essay (Written Response)	160	Minutes	Per 400 Words
Academic Engagement	Assessment: Short Essay (Written Response)	200	Minutes	Per 500 Words
Academic Engagement	Assessment: Matching Associate	5	Minutes	Per Item
	Bachelor	9	Minutes	Per Item
		Utilize individual assessments. 4 Hours maximum allowed. Individual items on final to be assessed by individual course component assessment values.		
Academic Engagement	Assessment: Final Exam			
Academic Engagement	Course Standard Elements (syllabus, emails, feedback, etc.)	90	Minutes	Per Week / Unit
Academic Engagement	Discussion Board Questions-Qualitative/LPL Journals	120	Minutes	Per Week / Unit
Academic Engagement	Discussion Board Questions-Quantitative/LPL Journals	90	Minutes	Per Week / Unit
Academic Engagement	Instructional PowerPoint Non-Multi-Media Associate	3	Minutes	Per Slide
	Bachelor	5	Minutes	Per Slide
Academic Engagement	Instructional Interactive Lesson Associate	4	Minutes	Per Slide
	Bachelor	6	Minutes	Per Slide
Academic Engagement	Instructional Video/Audio		Minutes	Per Unit
	Unit Lesson / Lecture Associate	9	Minutes	Per Page
Academic Engagement			Minutes	Per Page
	Bachelor	15	Minutes	Per Page
		Total Academic Engagement (33%-45hrs)		

How Do I Customize for My Institution?

- Create a document to meet the style and type of assignments
- Hold meetings with faculty and administrators
- Decide on the time (minutes) for each activity
- Present one course and have committee members complete a CHD
- Hold meeting to compare chosen time for the course activities and total course
- Divide time in minutes by 60 to calculate hours
- Looking for a minimum of 135 hours
- Revise time for each activity as needed
- Add elements or remove elements to meet minimum 135 hours

Questions?



Thank you for attending!!

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