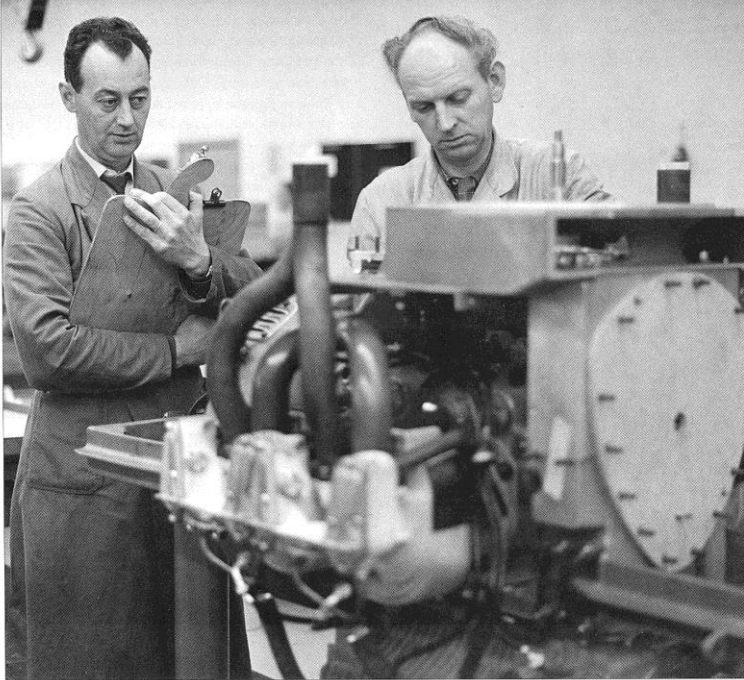





*Course name	Manual work analysis
1-2 Images describing the course subject	
*Examiner	Peter Almström, Chalmers
*More info, contact person	peter.almstrom@chalmers.se
*Course site and dates	Chalmers, Göteborg, April to June 2015
*Teachers /Tutors	<p><i>(incl. about 100 words short CV)</i></p> <p>Peter Almström is associate professor in production analysis. He has been studying productivity in industry since 2005 and has concluded that there is a large productivity potential that is mainly due to the lack of knowledge about manual work study. He has been lecturing at Chalmers about work studies since 2007 and got awarded Chalmer's Pedagogical Prize 2014 together with Cecilia Berlin for the course Production Ergonomics and Work Design.</p>

<p>Pictures of Teachers</p>	
<p>*Target group</p>	<p><i>(professionals who want to and doctoral students who wants to)</i> PhD students and other researchers that are within the “humans in production” area or researchers with a general interest of using correct times for operations that are dependent upon manual work activities.</p>
<p>*Overall Course Goal</p>	<p><i>(short, one sentence)</i> Give an insight into the area of work study and what is required to get correct times for manual activities.</p>
<p>Higher Education Credits/ “Points”</p>	<p>3</p>
<p>*Ingress Short Summary and aims</p>	<p><i>(max. 5 lines)</i> Manual work affects virtually all times used in industry, even if machines are producing the goods, people are needed to keep the machines running. The importance of these manual activities is often neglected, for example set-up time is often regarded as a constant for a specific machine regardless product type changed to or from.</p>
<p>*cont... Summary and aims</p>	<p><i>(max. 10 lines, continuing the field above)</i> Researchers within the production systems area are aware of the importance of having correct in-data to their models and calculations, but they tend to ignore how bad quality the available data for activities involving humans actually has. Companies are using the time data not only for planning, but also for calculating offers to customers and making investment decisions. The insight of the importance and knowledge about setting times correctly is very low in industry. Therefore it is very important for the researcher within this area to be able to question the times and have a selection of appropriate methods and tools to improve the time data quality.</p>
<p>*Learning outcomes</p>	<p><i>(USE ACTIVE WORDS reason about, describe, handle, apply, use, conduct, explain, analyse and evaluate. Use headers and bullets if possible)</i> Upon successful completion of the course, participants will be able to:</p> <ul style="list-style-type: none"> • Question the operation times used in “the systems” of industrial companies and other organisations. • Select a proper analysis method for an existing work place. • Understand the factors that affect time and productivity (capacity

	<p>and cost) in manual work tasks.</p> <ul style="list-style-type: none"> • Use the work sampling method. • Use the time study (stop watch) method properly. • Estimate performance rate (speed) of work. • Understand the requirements for setting correct time of a new work task. • Understand the requirements for Time Data Management.
*Course content	<p><i>(brief "popular" description of main content and important steps)</i> Lectures will be mixed with group discussions and practical exercises. Divided on three full days at Chalmers and tasks to do</p>
Expected pre-knowledge	<p><i>(courses or knowledge/experience required to follow course)</i> No specific.</p>
Registration info	<p><i>(instructions of how to register for course)</i></p>
Examination	<p><i>(Examination procedure)</i> Individual hand-in assignments about application of the methods studied in the course.</p>
Literature	<p><i>(books, papers, web-link, you tube...)</i> Maynard's Industrial Engineering Handbook Articles</p>
*Limiting number of participants	<p>20</p>
Detailed Course Structure/ Class sessions	<p><i>(structure and main "blocks" on a day and date to day and date to basis. Hours if possible on draft plan, hours definitely on final plan)</i> Productivity Management Time Data Management Industrial best practice Predetermined time systems Time study Performance rating Work sampling Allowance time Standardization</p>
Travelling directions incl. google map and coordinates <i>(to be added before first lecture)</i>	