



- Prep. Year	1038	84.85	
- First Year	186	74.73	
- Second Year	160	80.63	
- Third Year	75	86.67	
- Fourth Year	142	90.14	
<b>- Grading : No. and percentage in each grade</b>	Excellent	1	0.7 %
	Very Good	24	16.9 %
	Good	57	40.14 %
	Pass	21	14.79 %

<b>8. Academic Standards :</b>		
<b>-Achievement of Programme Intended Learning Outcomes</b>		<b>Achieved</b>
<b>- Academic Reference Standards</b>	<b>NARS</b>	
<b>Knowledge and Understanding</b>	Engineering	A.1) Concepts and theories of mathematics and sciences, appropriate to Production Engineering and Mechanical Design. A.2) Basics of information and communication technology (ICT) A.3) Characteristics of engineering materials related to Production Engineering and Mechanical Design. A.4) Principles of design including elements design, process and/or a system related to Production Engineering and Mechanical Design. . A.5) Methodologies of solving engineering problems, data collection and interpretation A.6) Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues. A.7) Business and management principles relevant to engineering. A.8) Current engineering technologies as related to Production Engineering and Mechanical Design. A.9) Topics related to humanitarian interests and moral issues. A.10) Technical language and report writing A.11) Professional ethics and impacts of engineering solutions on society and environment A.12) Contemporary engineering topics.
	Production Engineering and Mechanical Design	A.13) Concepts, principles and theories relevant to Mechanical Engineering and manufacture. A.14) The constraints within which his/her engineering judgment will have to be exercised. A.15) The specifications, programming and range of application of CAD and CAD/CAM facilities. A16) Relevant contemporary issues in mechanical engineering. A17) Basic electrical, control and computer engineering subjects related to Production Engineering and Mechanical Design. A18) The role of information technology in providing support for mechanical

		<p>engineers.</p> <p>A19) Engineering design principles and techniques.</p> <p>A20) Management and business techniques and practices appropriate to engineering industry.</p>
<b>Intellectual Skills</b>	Engineering	<p>B.1) Select appropriate mathematical and computer-based methods for modeling and analyzing problems.</p> <p>B.2) Select appropriate solutions for engineering problems based on analytical thinking.</p> <p>B.3) Think in a creative and innovative way in problem solving and design.</p> <p>B.4) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.</p> <p>B.5) Assess and evaluate the characteristics and performance of components, systems and processes.</p> <p>B.6) Investigate the failure of components, systems, and processes.</p> <p>B.7) Solve engineering problems, often on the basis of limited and possibly contradicting information.</p> <p>B.8) Select and appraise appropriate ICT tools to a variety of engineering problems.</p> <p>B.9) Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.</p> <p>B.10) Incorporate economic, societal, and environmental and risk management dimensions in design.</p> <p>B.11) Analyze results of numerical models and assess their limitations.</p> <p>B.12) Innovate systematic and methodic approaches when dealing with new and advancing technology.</p>
	Production Engineering and Mechanical Design	<p>B.13) Apply the principles of mathematics, science and technology in problem solving scenarios in mechanical engineering.</p> <p>B.14) Analyze and interpret data, and design experiments to obtain primary data.</p> <p>B.15) Evaluate and appraise designs, processes and products, and propose improvements.</p> <p>B.16) Interpret numerical data and apply analytical methods for engineering design purposes.</p> <p>B.17) Use the principles of engineering science in developing solutions to practical mechanical engineering problems.</p> <p>B.18) Select appropriate manufacturing method considering design requirements.</p>
<b>Professional</b>	Engineering	<p>C.1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.</p> <p>C.2) Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services.</p> <p>C.3) Create and/or re-design a process, component or system, and carry out specialized engineering designs.</p> <p>C.4) Practice the neatness and aesthetics in design and approach.</p> <p>C.5) Use computational facilities and techniques, measuring instruments, workshops and laboratory equipment to design experiments, collect, analyze and interpret results.</p> <p>C.6) Use a wide range of analytical tools, techniques, equipment, and software packages pertaining to Civil Engineering and develop required computer programs.</p> <p>C.7) Apply numerical modeling methods to engineering problems.</p> <p>C.8) Apply safe systems at work and observe the appropriate steps to manage risks.</p>

<b>and Practical Skills</b>		C.9) Demonstrate basic organizational and project management skills. C.10) Apply quality assurance procedures and follow codes and standards. C.11) Exchange knowledge and skills with engineering community and industry. C.12) Prepare and present technical reports.
	Production Engineering and Mechanical Design	C.13) Prepare engineering drawings, computer graphics and specialized technical reports and communicate accordingly. C.14) Employ the traditional and modern CAD and CAD/CAM facilities in design and production processes. C.15) Use basic workshop equipment safely. C.16) Analyze experimental results and determine their accuracy and validity. C.17) Use laboratory equipment and related computer software. C.18) Operate and maintain mechanical equipment. C.19) Prepare the process plan for manufacturing
<b>General and Transferable Skills</b>	Engineering	D.1) Collaborate effectively within multidisciplinary team. D.2) Work in stressful environment and within constraints. D.3) Communicate effectively.
	Production Engineering and Mechanical Design	D.4) Demonstrate efficient IT capabilities. D.5) Lead and motivate individuals. D.6) Effectively manage tasks, time, and resources. D.7) Search for information and engage in life-long self learning discipline. D.8) Acquire entrepreneurial skills. D.9) Refer to relevant literatures.

<b>- Methods of Supporting the Low- Capacity – Students and outstanding students :</b>	For low capacity students	Assign a portion of the office hours for those students.
		Give them specific tasks.
		Repeat the explanation of some of the material and tutorials.
		Assign a teaching assistance to follow up the performance of this group of students.
	For outstanding Students	Hand out project assignments to those students.
		Give them some research topics to be searched using the internet and conduct presentation.
		Encourage them to take parts in the running research projects.
<b>-References standards for the programme :</b>	<b>Assessment</b>	<b>NARS</b>
<b>- Guidebook for the programme :</b>	<b>Available</b>	<input checked="" type="checkbox"/>
	<b>Unavailable</b>	<input type="checkbox"/>
<b>- Periodical revision system for the programme :</b>	<b>Available</b>	<input checked="" type="checkbox"/>
	<b>Unavailable</b>	<input type="checkbox"/>
	<b>Yearly</b>	<input type="checkbox"/>
	<b>More than year</b>	<input checked="" type="checkbox"/>

- Adequacy of the programme academic Structure With the outcomes :	The Production Engineering and Mechanical Design Department has a variety of staff in diverse specifications that cover all the necessary teaching and training efforts to achieve the ILOs of the program. This is dynamically changing according to accepted number of students and the number of staff on special leave.
- Management and organization defects :	Official leaves of staff enforced by laws may present a staff deficiency in some specialization in the program.

### 9. Students assessment to measure the achievement of the Intended learning outcomes (ILOs)

- Assessment Tools :	<ul style="list-style-type: none"> <li>- Written examination</li> <li>- Oral examination</li> <li>- Laboratory work</li> <li>- Class work</li> <li>- Tutorials</li> </ul>														
- Schedules :	<table border="1"> <thead> <tr> <th>Assessment Method</th> <th>week</th> </tr> </thead> <tbody> <tr> <td>Final Examination (<i>written</i>)</td> <td>16<sup>th</sup></td> </tr> <tr> <td>End of term assessment (<i>Oral</i>)</td> <td>15<sup>th</sup></td> </tr> <tr> <td>End of term laboratory examination (<i>Lab</i>)</td> <td>16<sup>th</sup></td> </tr> <tr> <td>Mid term written Examination1 (<i>Term Work</i>)</td> <td>8<sup>th</sup></td> </tr> <tr> <td>Mid term written Examination 2 (<i>Term Work</i>)</td> <td>12<sup>th</sup></td> </tr> <tr> <td>Tutorial and report assessment (<i>Term Work</i>)</td> <td>weakly</td> </tr> </tbody> </table>	Assessment Method	week	Final Examination ( <i>written</i> )	16 <sup>th</sup>	End of term assessment ( <i>Oral</i> )	15 <sup>th</sup>	End of term laboratory examination ( <i>Lab</i> )	16 <sup>th</sup>	Mid term written Examination1 ( <i>Term Work</i> )	8 <sup>th</sup>	Mid term written Examination 2 ( <i>Term Work</i> )	12 <sup>th</sup>	Tutorial and report assessment ( <i>Term Work</i> )	weakly
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- External reviewer - Comments ( if any ) :	Prof. Dr. Abd El-Fattah Khorshed														

### 10- Learning resources :

- Ratio of department members to students :	<p>No. and ratio of faculty members and their assistants to student: 49 / 424 8.65 %</p> <p>Almost (1 staff for 9 students)</p>
- Matching of department members specialization to programme needs :	<p><b>Adequate</b> <input type="checkbox"/></p> <p><b>Adequate to some extent</b> <input checked="" type="checkbox"/></p> <p><b>Inadequate (Why?)</b> <input type="checkbox"/></p> <p>Drop in some specializations (due to official leaves),</p>

	remedial through assigning similar specialization for teaching.
<b>- Adequacy of library :</b>	<b>Adequate</b> <input type="checkbox"/> <b>Adequate to some extent</b> <input checked="" type="checkbox"/> <b>Inadequate (Why?)</b> <input type="checkbox"/> To be updated with new references
<b>- Adequacy of laboratories :</b>	<b>Adequate</b> <input type="checkbox"/> <b>Adequate to some extent</b> <input checked="" type="checkbox"/> <b>Inadequate (Why?)</b> <input type="checkbox"/> Under continuous upgrade

<b>- Adequacy of computer facilities :</b>	<b>Adequate</b> <input type="checkbox"/> <b>Adequate to some extent</b> <input checked="" type="checkbox"/> <b>Inadequate (Why?)</b> <input type="checkbox"/> Department has its own computer lab fairly equipped and requires periodical upgrade
<b>- Extent of cooperation with industry and business community in providing training opportunities for students :</b>	Through faculty management (still need improvement)
<b>- Any other programme needs :</b>	Making available more educational space / rooms

### ***11- Quality management and development***

<b>- Follow up system for defects sides.</b>	<b>Effectual</b> <input type="checkbox"/> <b>Effectual to some extent</b> <input checked="" type="checkbox"/> <b>Ineffectual (Why?)</b> <input type="checkbox"/>
<b>- Effectiveness of faculty and University laws and regulations :</b>	<b>Adequate</b> <input checked="" type="checkbox"/> <b>Adequate some extent</b> <input type="checkbox"/> <b>Inadequate (Why?)</b> <input type="checkbox"/> <b>List any inadequacies</b> <input type="checkbox"/> Through internal faculty procedures
<b>- Effectiveness of internal revision system in development the programme :</b>	Fairly Effective through continuous communications
<b>- Comments of external reviewers in respect to the programme ILOs and assessment standards</b>	Attached

## ***12- Proposals for programme development***

<b>-Programme Structure (Courses/hours)</b>	New Bulletin (Layha) was prepared for the department under approval
<b>- Courses , deletions and additions and modifications</b>	Included in new Bulletin
<b>- Training and Skills</b>	Extend training with other stakeholders
<b>- Stakeholders recommendations for development of the programme</b>	Verbal Contacts with some of current stakeholders to be transformed into written recommendations
<b>- Preson responsible</b>	Department Head
<b>- Completion date</b>	One academic year

<b>Coordinator of Program Quality Assurance Committee</b>	<b>Head of Production Engineering and Mechanical Design Dept. Council</b>
Prof. Ahmed Mahmoud Ali Esa	Prof. Dr. Taha A. El-Taweel
26/ 7 / 2014	26/ 7 / 2014

**Programme Coordinator**  
**Prof. Ahmed Mahmoud Ali Esa**  
**Signature:**  
**Date:**

**Head of Department**  
**Prof. Taha A. El-Taweel**  
**Signature:**  
**Date:**