



## Engineering Intern Experience Checklist

<b>Engineering Intern Experience Checklist</b>	
Is the position being considered exclusively for a graduate from an engineering degree program?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If 'No' to the above, what other academic qualifications would be suitable?	
<b>SUPERVISION</b> - <i>A professional intern needs to learn from a licensed practitioner within the same profession</i>	
Will the supervisor be a licensed professional engineer?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If 'No' to the above, would someone take professional responsibility for the work being performed by the intern?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Would the intern have access to a 'mentor' who is a licensed professional engineer who could monitor the work being assigned and performed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>QUALITY OF EXPERIENCE</b> - <i>Licensing of an engineering intern is structured along the lines of five criteria which must be met over the course of the 48 month internship</i>	
<b>Please circle or highlight the relevant items from the listings below and indicate proportion of time that the intern will be spending in each of them.</b>	
<b>APPLICATION OF THEORY</b> - <i>To qualify as engineering work, at least one component of the following must be present in the position as a significant percentage of the job function. The work should involve the use of engineering principles taught during an engineering degree program.</i>	
<b>Analysis:</b> <i>scope &amp; operating conditions, performance assessment, safety &amp; environmental issues, technology assessment, economic assessment, reliability analysis</i>	Present in the position? <input type="checkbox"/> Yes %____ <input type="checkbox"/> No
<b>Design &amp; Synthesis:</b> <i>functionality or product specification, component selection, integration of components &amp; sub-systems into larger systems, reliability &amp; maintenance factors, environmental &amp; societal implications of the product or process, quality improvements</i>	Present in the position? <input type="checkbox"/> Yes %____ <input type="checkbox"/> No
<b>Testing Methods:</b> <i>devising testing methodology &amp; techniques, verifying functional specifications, new product or technology commissioning &amp; assessment</i>	Present in the position? <input type="checkbox"/> Yes %____ <input type="checkbox"/> No
<b>Implementation Methods:</b> <i>applying technology, engineering cost studies, optimization techniques, process flow &amp; time studies, implementing quality control &amp; assurance, cost/benefit analysis, safety &amp; environmental issues &amp; recommendations, maintenance &amp; replacement evaluation</i>	Present in the position? <input type="checkbox"/> Yes %____ <input type="checkbox"/> No

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<p><b>PRACTICAL EXPERIENCE</b> - Provides interns with an appreciation of the fundamental roles of function, time, cost, reliability, reparability, safety &amp; environmental impact in their work, through the opportunity to experience/understand/acquire knowledge about the following:</p>	
<p><b>Function of Components within a System:</b> merits of reliability, role of computer software, relationship of the end product to the equipment &amp; control systems</p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>Limitations of Practical Engineering &amp; Related Human Systems:</b> production methods, manufacturing tolerances, operating &amp; maintenance philosophies, ergonomics</p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>Significance of Time in the Engineering Process:</b> work flow, scheduling, equipment wear out, corrosion rates and replacement scheduling</p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>Codes, Standards, regulations &amp; Laws that govern Applicable Engineering Activities</b></p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>MANAGEMENT OF ENGINEERING – Planning</b> including development of a concept &amp; evaluation of alternatives, <b>Scheduling</b> including allocation of resources &amp; assessing impact of delays, <b>Budgeting</b> including identification of resources to assessment of cost escalation, <b>Supervision</b> including leadership, organization &amp; motivational skills, <b>Project Control</b> including coordination, monitoring &amp; taking corrective action, <b>Risk Assessment</b> including performance &amp; social &amp; environmental impacts</p>	
<p><b>COMMUNICATION SKILLS - Written Work</b> including briefs or formal reports, <b>Oral Reports or Presentations</b> to peers, management, scientific community and/or the general public.</p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>SOCIAL IMPLICATIONS OF ENGINEERING</b> – Awareness of Potential Consequences both <b>Positive</b> and <b>Negative</b> of a Project, Recognition of Value to the Public, <b>Safeguards</b> to Mitigate Adverse Impacts, Role of <b>Regulatory Agencies</b>, and <b>Responsibility</b> to Guard Against Conditions Dangerous or Threatening to Life, Limb, Property or the Environment.</p>	<p>Present in the position?  <input type="checkbox"/> Yes %____ <input type="checkbox"/> No</p>
<p><b>NOTE:</b> These guidelines can help applicants, supervisors, referees and employers assess whether a job position offers sufficient engineering to help meet the five quality-based criteria of :</p> <ul style="list-style-type: none"> <li>◆ Application of Theory</li> <li>◆ Practical Experience</li> <li>◆ Management of Engineering</li> <li>◆ Communication Skills</li> <li>◆ Social Implications of Engineering</li> </ul>	