Keeping a lab notebook

Required as part of your project-adviser (PH481-2) grade
Put all work, including wild ideas and incorrect calculations, directly into notebook
Make notebook only record of project
Could be very important for protection of IP
Describe your work & record data as work is performed
Paste or Scotch-tape loose sheets into notebook
Maintain and update a table of contents
Do as I say, not as I do
What is the purpose of the notebook?
What is the purpose of the notebook?

Recording details of experiments for future use

Documenting research

  For later use

  For finding errors in your procedures

  For your successors

  For the patent attorney (verify date of invention)
What goes into the notebook?
What goes into the notebook?

List of equipment and supplies
Sketch of experimental setup including block diagrams of components and connections
Circuit and wiring schematics
Procedure
Instrument settings
Computer programs
Sources of errors and their values
Measurement resolution, noise, drift, other uncertainties
Observations
Results and discussion
Conclusions
<table>
<thead>
<tr>
<th>Real world</th>
<th>Senior design</th>
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</thead>
<tbody>
<tr>
<td>Bound notebook</td>
<td>Loose leaf OK</td>
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<tr>
<td>Entries in permanent ink</td>
<td>Pencil OK</td>
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<tr>
<td>Entries clear, legible, understandable, so co-worker can continue or duplicate</td>
<td>Entries clear, legible, understandable, so student can continue or duplicate</td>
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<td>Figures, data glued in as necessary</td>
<td>Scotch tape OK</td>
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<td>Notes in strict chronological order</td>
<td>Additions OK but preferably dated or in colored pencil</td>
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<td>Each page dated</td>
<td>Each entry or topic dated</td>
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<td>Notebook property of company &amp; left behind</td>
<td>Notebook left behind at discretion of research adviser</td>
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<td>Notebook restricted to plant</td>
<td>Notebook not restricted</td>
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Details

Leave blank pages for table of contents
  Number all pages
Initial and date every page or every new entry
Start each new experiment on a new page
Put heading on each page
  Beginning of a new experiment?
  Continuation of previous experiment?
Use lots of space
Draw lots of sketches
  Wiring diagrams
  Schematics
Do all calculations in the notebook