



Michigan Tech

Improving Processes, Reducing Error Rates:

The Checklist Process

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- ✓ Experts in aviation and medicine (high stakes) have reduced error rates by implementing checklists.
- ✓ The magic is not in the checklist—it's in the process
- ✓ This can work for *us*
 - Doing better on exams (avoid the avoidable)
 - Spending time to build knowledge, skills of value
 - Practicing a good engineering process

The Checklist Manifesto: How to Get Things Right, Atul Gawande, (Picador, 2011)

The Trick To Surviving A High-Stakes, High-Pressure Job? Try A Checklist, Shankar Vedantam, Hidden Brain Podcast, 30 Oct 2017, www.npr.org/2017/10/30/559996276/the-trick-to-surviving-a-high-stakes-high-pressure-job-try-a-checklist, accessed 3Nov2017.

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✓ Ask: ***What goes wrong***

- On a test, for example:
- Wrong sig figs
 - Calculator error
 - Fail to answer the question asked
 - Ran out of time

✓ Ask: ***What can be done to NOT do that***

- ???

✓ ***Think ahead: What can be done to recover, if something goes wrong? Prepare for this.***

- ???

✓ The magic is not in the checklist—it's in the **process**

✓ This can work for ***us***



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- ✓ Ask: What goes wrong
- ✓ Ask: *What can be done to NOT do that*
- ✓ Think ahead: *What can be done to recover, if something goes wrong?
Prepare for this.*

Simply making a checklist does not reliably work

What works is following this process ahead of time

For us: follow this process while studying