

UNIVERSITY of WASHINGTON  
COLLEGE of ENGINEERING

*Industrial Engineering*

# ***Design For Production Workshop Planning***

Submitted by  
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of  
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at  
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on  
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# Workshop Goals

- Understanding of the impact of initial design decisions on the cost of ship construction, life cycle operation & maintenance, and disposal
- Understanding of what design aspects have the greatest impact on cost
- Understanding of how to incorporate production considerations into design at all stages
- Understanding of rule based design and parametric design
- Understanding of an interim product structure
- Understanding of how to develop an interim product database
- Understanding of process engineering

# Workshop Structure

- Schedule each workshop for 1.5-2.0 days
- Keep the attendance low to facilitate interactive learning—somewhere in the range of 20-30. If desired, though, more people could be accommodated in the lead-off introductory session.
- Ensure proper mix of participants, including Navy design community representatives, designers and production engineers. The group will be broken up into small teams (3-5) for the workshop exercises – each team will represent all groups.

# Workshop Agenda

<b>Day 1</b>	
20 min	Kick-off by senior shipyard and/or Navy Official
2 hours	Introduction to DFP principles
4 hours	Outline and Conduct Exercise #1 – small groups of 3-5
1 hour	Review Day 1 lessons and accomplishments
<b>Day 2</b>	
4 hours	Outline and Conduct Exercise #2 – small groups of 3-5
2 hours	Review Day 2 lessons and accomplishments Provide guidance on how apply principles at their shipyard

# Workshop Content

- The opening sessions will include a keynote kickoff by a senior shipyard and/or Navy official such as PEO Ships, NAVSEA 05 (Ship Design Integration and Engineering) or NAVSEA 05D (Director, Future Concepts and Surface Ship Design Group), followed by an introductory session generally addressing DFP/DFA principles, methods and organization. Senior Navy people should be encouraged to attend this session in order to gain buy-in.
- The bulk of the workshop will involve small group exercises involving application of DFP principles. Professional diversity on each team (designers, builders, Navy) will ensure all perspectives are covered within each team.
- A wrap-up to review what was done and what was learned will conclude the workshop.
- Although DFP is often focused on ship construction and reducing acquisition costs, the focus of this effort should include the ship life cycle and total ownership cost.

# Project Tasks

- Task 1 – Develop lecture material for Design for Production, Assembly, Affordability, Life Cycle, etc.
- Task 2 – Prepare workshop exercise materials for a Naval combatant engine room.
- Task 3 – Review and test workshop lecture and exercises.

# Project Timing

- Duration to plan these workshops is 3-6 months
- Events will be scheduled in a timely manner when convenient to key participants.
- Project startup is anticipated in one month.
- Material development and testing to be completed by early summer 2007.