

Ending

Course Summary

EPSRC

NERC SCIENCE OF THE ENVIRONMENT

 **archer**

CRAY
THE SUPERCOMPUTER COMPANY

epcc



Overview

- Quick Recap of Development
- Ask Questions
- The most important factor in software work is not the tools and techniques used by the programmers, but rather the quality of the programmers themselves.
Facts and Fallacies of Software Engineering, Robert Glass



Structure: Process, Team

- Why do we need process?
- Team structures
- Project Structures

- Question:
 - What is a project?



Approaches

- Development Approaches:
 - Waterfall, Iterative, Agile
- Project Management Approaches:
 - PRINCE2
 - Project Management Professional (PMP)
 - IPMA Approach
- Development and Management Approaches can work together



Runaway Projects

- Question:
 - Why do projects either:
 - Fail
 - Go over budget
 - Spiral out of control
 - Have to reduce scope



Possible Causes

- Poor Estimation
- Unstable Requirements
- Missing Requirements
- Changing Team
- Changing Focus



Estimation

- No single way
- Expert/Experience vs Algorithmic
- Use both to create bounds on estimate
- Difficult but Why?



Testing

- What should we test?
- When should we test?
- Who should test?



Requirements

- Not an easy task
- Requires focus
- Mediation
- Methods of capture



Prototyping and Thinking

- What is the first thing to do on a problem?
- How do we test ideas?
- Importance of Prototyping



Project Reviews

- Why do a review?
- Who should be involved?
- Types of Review?



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Topics

- Ethics and Safety in Design and Use of Software
- Testing Issues
- What else?



Topics for Discussion

- Ethics
 - Safety
 - Responsibility
 - Effects
- Testing
 - Limits
 - Confidence
 - Standards?
- Work
 - Balance
 - Professionalism
 - Becoming Obsolete

