

Software Engineering Topics

Introduction to Software Engineering

- 1) Ghezzi *et al.* [35], chapters 1 and 2
- 2) Shooman [78], chapter 1
- 3) Sommerville [79], chapter 1

Software Crisis and the Response

- 1) Boehm [10] in [33]
- 2) Brooks [17] in [33], or [18]
- 3) For the response look over Tausworthe [82]
- 4) Parnas [64]

Software Life-cycle

- 1) Boehm [9]
- 2) Tausworthe [82], chaps. 11, 12 and 13
- 3) Look at docs. in Bruce & Pederson [19]
- 4) Davis *et al.* [28]

Documentation

- 1) Tenny [83]

Project Management

- 1) Jensen and Tonies [46], chapter 2
- 2) Thayer *et al.* [84]
- 3) Liu and Horowitz [54]
- 4) Cooper [26]
- 5) Howes [42]
- 6) Scacchi [73]
- 7) Bryan and Siegel [20]
- 8) Branstad and Powell [16]

Analysis → Requirements Specification

- 1) Freeman [32] in [33]
- 2) Ross & Schoman [72]
- 3) Ross [71]
- 4) Boehm *et al.* [13]
- 5) Jalote [45]
- 6) Lausen [52]
- 7) Meyer [56]

Design → A Detailed Design Solution

- 1) Fairley [30], chapter 5
- 2) Privitera [69] in [33]
- 3) Basili and Reiter [3] in [93]
- 4) Mills and Linger [58]
- 5) Parnas and Clements in [65] for a contrary view
- 6) Card *et al.* [24]
- 7) Parnas [63], of historical importance

Particular Methodologies for Specification and Design

- 1) Gane and Sarson [34]
- 2) Cameron [23] on JSD
- 3) Ward [86]
- 4) Henderson [38] (link to C311 !!)
- 5) Heitmeyer [39]
- 6) Hayes [37]

- 7) Kung [50]
- 8) Ossher [62]
- 9) Stelovsky and Sugaya [80]

Verification, Validation and Quality Assurance

- 1) Buckley and Poston [22]
- 2) Weinberg and Freedman [88]
- 3) Fairley [30], chapter 8
- 4) Buckley [21]
- 5) Weiss and Weyuker [90]
- 6) Goel [36]
- 7) Nosek and Schwartz [61]
- 8) Weiss and Basili [89]

Reviews and Walkthroughs

- 1) Parnas and Wiess [66]
- 2) Bisant and Lyle [8]

Planning and Scheduling

- 1) Pfleeger [67], chapter 2
- 2) Fairley [30], chapter 2
- 3) Myers [59] in [93]

Cost Estimation

- 1) Fairley [30], chapter 3
- 2) Boehm [12]
- 3) recommended: Boehm [11]
- 4) Boehm and Papaccio [14]

Software Complexity and Software Metrics

- 1) Weyuker [91]
- 2) Shen, Conte, and Dunsmore [76]
- 3) Coulter [27]
- 4) Lind and Vairavan [53]
- 5) Kafura and Reddy [48]

Testing

- 1) Pfleeger [67], chaps. 7 & 8
- 2) Frankl and Weyker [31]
- 3) Basili and Selby [4]
- 4) Howden [41]
- 5) Clarke, Hassell, and Richardson [25]

Configuration Management

- 1) Bruce & Pederson [19]
- 2) Bersoff [7]

Particular Development Methodologies

- 1) Selby, Basili, and Baker [75]

Software Maintenance

- 1) Fairley [30], chapter 9
- 2) Schneidewind [74]
- 3) Bendifallah and Scacchi [6]
- 4) Narayanaswamy and Scacchi [60]
- 5) Kafura and Reddy [48]
- 6) Rombach [70]
- 7) Yau and Tsai [92]

Reusable Software

- 1) Jones [47]
- 2) Kernighan [49]
- 3) Horowitz & Munson [40]

Staffing and Project Psychology

- 1) Weinberg [87], chaps. 1, 2, 4, 5, 6
- 2) Shneiderman [77], chaps. 1 & 3
- 3) Abdel-Hamid [1]

Philosophy: Is Software Engineering engineering?;

- 1) Parnas & Clements [65]
- 2) Basili, Selby & Hutchens [5]
- 3) Shen, Conte & Dunsmore [76]

Object-Oriented Programming

- 1) Booch [15]

Software Standards

- 1) Barnard, Metz, and Price [2]
- 2) Buckley and Poston [22]
- 3) Buckley [21]
- 4) Branstad and Powell [16]

Software Engineering Education

- 1) Mills *et al.* [57]