USC Viterbi
School of Engineering

University of Southern California

Academic Programs

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Vice Dean for Academic Programs
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Interim Director, Information Technology Program

New Faculty Orientation
August 16, 2018

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Note: Much of this content originated with Prof. James Moore, previous Vice Dean for Academic Programs

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Academic Programs Overview

Assist with the Academic Mission of the Departments/Units

- Curriculum Development and Procedures
- Accreditation (ABET, WASC)
- Special Programs and Divisions
- Engineering Education
- General Academic Issues
- Evaluation of Teaching

Institutional Context

- USC Viterbi undergrads are excellent (*e.g.*, more Caltech-level students than Caltech)
- USC Viterbi is the national leader in distance education for grad engineering
- More MS students than any other U.S. school of engineering (ASEE 2015)
- USC and NYU have more international students than any other school
- Try to deliver undergraduate education with full-time personnel
- LA is enormous advantage for USC: economy, industry-experienced faculty

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Curriculum Development & Procedures

- All electronic (since 2014) through *Curriculog* & *Acalog* systems
- Curriculum is probably the most faculty-centered process at USC
  - Viterbi & University have roles but most important actions in Dept/Unit
  - Room for more creativity (concept/delivery) than most faculty realize
- For proposing new/revised courses or programs:
  - Start with your dept. chair and dept. curriculum coordinator
  - Develop syllabi (templates/examples: arr.usc.edu/services/curriculum/resources.html)
    - Detailed scenario (not a contract) but must be well thought-out & complete to persuade committees that students will find no reasonable complaint
    - Goals, textbook, weekly readings/HW, grading practice, boilerplate text
  - Work with department curriculum committee to submit on Curriculog
    - 2018–19 deadlines: Nov 21 for revisions, Jan 19 for new courses/programs
    - But start early as more than one iteration is common
  - Must discuss with any "Affected Units"
  - Viterbi Academic Programs Coordinator: Ann Langford (blanfor@usc.edu)
  - Viterbi curriculum cmte. (reps from each dept.) meets ~monthly
  - University level takes ~1mo for courses, ~2mo for new programs/minors
- Special Topics (499/599) must have full syllabi before listed on SoC

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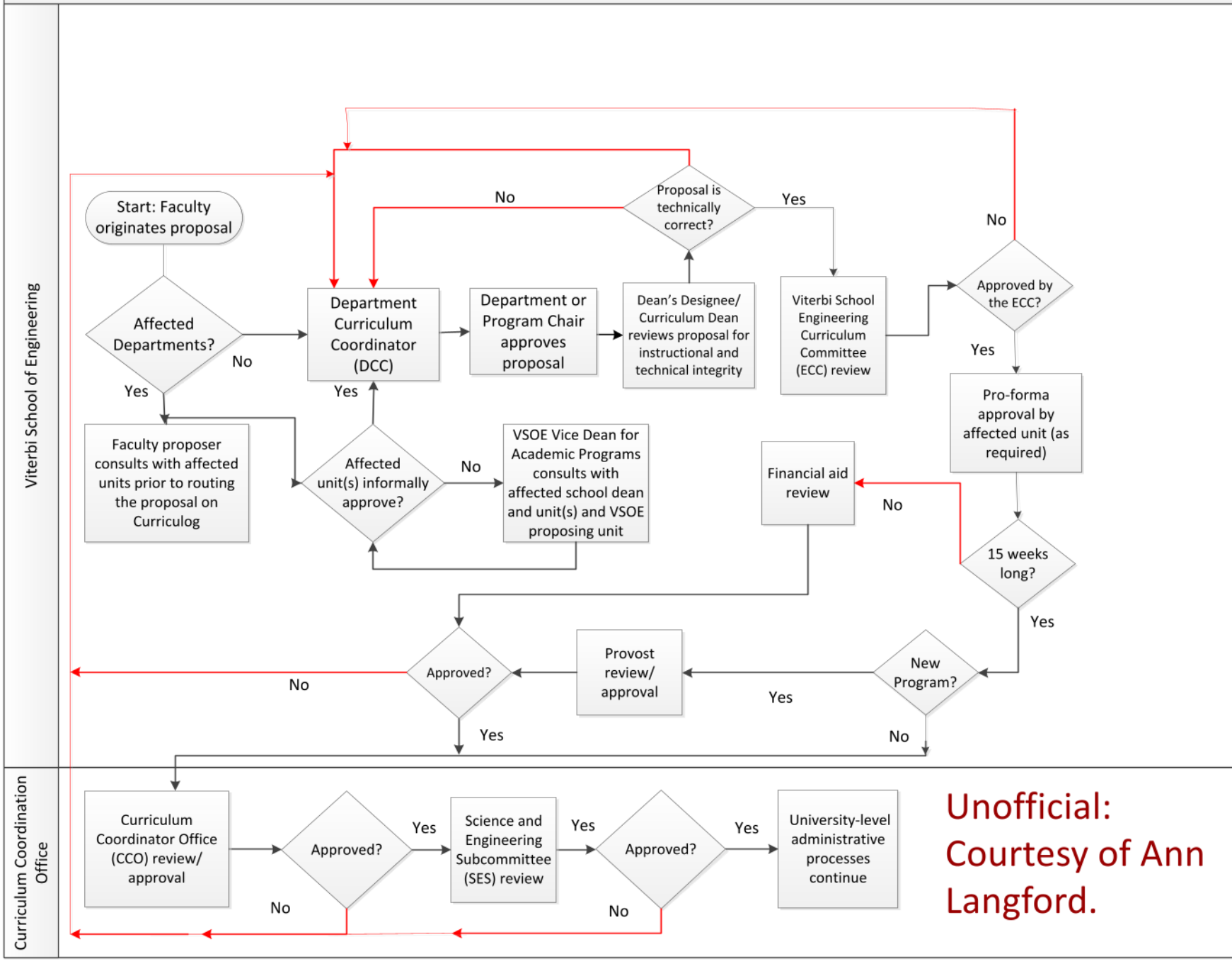
Curriculum Review/Approval Process



Unofficial: Courtesy of Ann Langford.

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Accreditation

- ABET (Accreditation Board for Engineering and Technology) is the primary accreditation agency for engineering
  - Last visit in October 2015, accredited through Sept. 2022
  - Next ABET self-study due Summer 2021
    Next ABET visit in Fall 2021
  - A **lot** of the work is done in the Departments
    - Most departments have an ABET lead (or two)
    - Most faculty involved with collecting materials to document undergraduate student progress, using assessments of their own course to update on a regular cycle
  - Dean's office helps, coordinates, advises, etc.
- USC overall accredited by WASC (Western Association of Schools and Colleges)
  - Last accreditation in 2015, next visit 2020–21

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Special Programs

Oversight of special (non-department) programs:

- Engineering Writing Program (Director: Steve Bucher)
  - Courses & resources to help undergrad & grad students communicate, written and orally, as integral part of their work & professional lives
  - Student Publications: *Illumin* online magazine, *Conversations in Ethics*
- Information Technology Program (Interim Director: Erik Johnson)
  - courses in web development, new media, 3D animation, security, programming, video game design/programming, graphics, other IT topics
  - No majors, but 13 Minors and Specializations
  - >80% of ITP students are non-engineers from all across USC campus
- Systems Architecting and Engineering (Technical Director: Azad Madni)
  - education in advanced knowledge/skills for conceptualizing, designing, implementing, testing, certifying and managing complex systems
  - applications: aerospace, defense, healthcare, smart grid, transportation, …

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Special Programs

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- Engineering Writing Program (Director: Steve Bucher)
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- Information Technology Program (Interim Director: Erik Johnson)
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- Systems Architecting and Engineering (Technical Director: Azad Madni)
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- Jr/Sr: WRIT 340 *Advanced Writing Communication for Engineers*
- MS: ENGR 595 *Professional Writing and Communication for Internships*
- PhD: ENGR 502 *Writing Skills for Engineering Ph.D. Students*
  ENGR 503 *Oral Communication Skills for Engineering Ph.D. Students*

Minors:

- 3D Computer Graphics and Modeling
- Applied Analytics
- Applied Computer Security
- Computer and Digital Forensics
- Computer Programming
- Enterprise Information Systems
- Innovation: the Digital Entrepreneur
- Mobile App Development
- Video Game Design and Management
- Video Game Programming
- Web Technologies and Applications

- M.S. Systems Architecting and Engineering
- Graduate Certificates in:
  - Systems Architecting and Engineering
  - Network Centric Systems
  - Software Architecting

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Engineering Education

- Division of Engineering Education (Chair/s: TBD)
- Pedagogical Initiatives (w/Prof. Gigi Ragusa)
- Engineering Freshman Academy (w/Sr. Assoc. Dean Louise Yates)
- Graduate-student Academic Integrity (w/Steve Bucher)
- Viterbi Center for Excellence in Teaching (ViterbiCET) (in development)

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General Academic Issues

- Grade disputes & Academic Integrity appeals
  - Both procedures are in SCampus (The USC Student Handbook) https://policy.usc.edu/files/2016/01/SCampus-2017-18-Complete-for-posting.pdf
  - Report suspected violations of academic integrity!
- Work with Executive Vice Dean (Gaurav Sukhatme)
  - Ph.D. committee approvals
  - Department instructional budgets
- Evaluation of Teaching (w/Timothy Pinkston)
- Coordinate Viterbi faculty teaching General Seminar (GESM), Freshman Seminar (FSEM)
  - 19-student general education — if interested (not in first few years), e-mail me with copy to your dept. chair
- Any other academic programs issues

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How is Teaching Evaluated?

- For annual merit and for promotion

- Previously:
  - Dominated by average course evaluation scores
- Now and going forward:
  - Peer observation
  - Evaluation of teaching materials (syllabi, teaching statement)
  - Course evaluations
  - …

- The Provost has asked the Viterbi faculty to develop a framework in **Fall 2018** for how we can best evaluate teaching in engineering
  - Your feedback is important!

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Advice

- Teach well. The cost of a USC undergraduate education is >$70k/yr.
  - USC has the largest(?) university-sourced pool of financial aid
- Develop advanced courses in your area of expertise
  - Jr faculty are at the cutting edge
  - T/TT: particularly on doctoral students and advanced MS students
  - All new faculty bring a new perspective — that's always good
  - Consider proposing a *499/599/699 special topics course
    - Discuss with your chair; submit a syllabus for approval via dept. staff
- Do your share of undergraduate instruction.
- For tenure-track faculty: build a research group and publish, propose, publish, propose, ...
  - Ask to teach doctoral courses, special topics (499/599) courses

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Questions

- I'm glad to answer questions now or later (JohnsonE@usc.edu, 1-0067)

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Curriculum Process (the LONG details)

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Note: Much of this content originated with Prof. James Moore, previous Vice Dean for Academic Programs

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Observations and Advice (Cont.)

- VSOE Academic Programs Coordinator: **Ann Langford**
  - Highly qualified, joined us in January of 2015 from Northrop Grumman, where she developed flight operations training materials for the F-35 Lightning II program.
  - USC Masters in Instructional Technology & Doctorate in Educational (Instructional) Psychology.
  - Dean's designee: Viterbi's interface with the CCO.
  - On campus 20 hours per week in OHE 330, reachable at 1-5564 but better by e-mail blangfor@usc.edu .
  - Highly knowledgeable and effective.
  - Responsive, great source of procedural advice.
- You want her in your corner:
  - Trust me on this.

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Observations and Advice (Cont.)

- We need to further strengthen our doctoral curricula.
- You are the most important curriculum resource we have.
  - Junior personnel are at the cutting edge: Please capture what you know for the curriculum.
  - Regardless of whether you are junior or senior, you bring a new perspective to our programs. We embrace this.
- You need to establish a research agenda here at USC.
  - This means connecting to doctoral students, so ask to teach doctoral courses.
  - Ask to offer special topics courses.
- Do your share of undergraduate instruction.
- If you are interested in offering a 19 person general education seminar (generally later for junior faculty), please email me and copy your department chair.

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Curriculum Proposals: Resources

- Curriculum approval is a highly pluralized process: It seems everybody and his or her brother or sister is a stakeholder.
- Proposals always start with individuals or small teams.
- See the Office of Academic Records and Registrar website for resources:
  - http://arr.usc.edu/services/curriculum/generalinfo.html is the Curriculum Coordination Office page.
  - http://arr.usc.edu/services/curriculum/submission-timeline.html is a submission timeline.
  - http://arr.usc.edu/services/curriculum/resources.html
    - Syllabus Template.
    - Curriculum Handbook.
    - And More.

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Curriculum Proposals (Cont.): Department

- Syllabi and programs are approved first at the department level, i.e., at the faculty level.
  - This is an offer to the Dean and the Provost to take academic responsibility for the course or program.
    - Every program has a departmental owner.
    - Departments and Schools can collaborate. Joint programs have a single administrative owner, but more than one faculty group can share responsibility for content.
  - A proposed syllabus is a detailed scenario, not a contract.
  - The faculty champion's goal is to use the syllabus to persuade all third parties involved that the proposed course is sufficiently well thought out and well organized that students will find no reasonable opportunity to complain.

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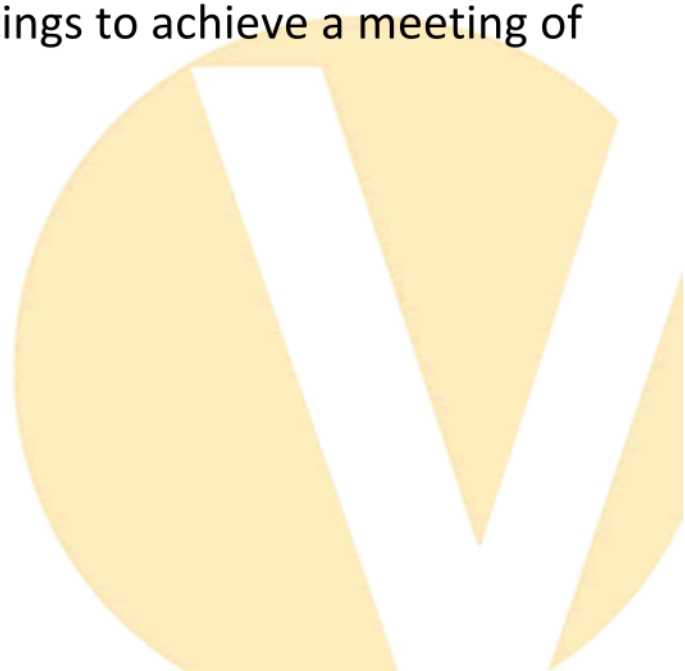
Curriculum Proposals (Cont.)

- Curriculog input is usually a task for the department's curriculum coordinator (DCC), typically a student services staff member.
- Acting on the direction of the Department Chair or appropriate faculty member, the DCC circulates proposals to affected internal and external units.
  - This initial informal step occurs outside Curriculog.
  - This may (likely will) lead to negotiation, which is executed outside Curriculog though phonecalls, emails and meetings to achieve a meeting of the minds.



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Curriculum Proposals (Cont.)

- If another School is involved, the object of the negotiation is typically fiscal, though this will tend to be veiled.
- Concurrence by affected units is documented within Curriculog as a pro forma step once agreement is achieved externally and the DCC submits the proposal.
- This includes units internal to VSOE.
- External units that decline to respond are presumed to favor the proposal, but Curriculog is designed to force a response.
- Other units cannot veto a curriculum proposal, but affected units can force a substantive discussion by not approving a proposal in Curriculog.

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Curriculum Proposals (Cont.): Department to School

- Department forwards the proposal via Curriculog to Dean's Office for discussion by Engineering Curriculum Committee
  - Deadlines to arrive in the Dean's office:
    - **November 21** for revisions to be in the 2019–20 Catalogue (because they are due to the University by December 17)
    - **January 19** for new courses/programs to be in the 2019–20 Catalogue (due to the University by February 11)
    - BUT: early submission is recommended as sometimes additional info is needed
  - Academic Programs Coordinator (Ann) organizes submissions for review by the Engineering Curriculum Committee.
  - Submissions might be returned
    - by the Academic Programs Coordinator for changes after review.
    - by committee for changes or broader circulation to affected units.
  - It is incumbent on VSOE Departments to resolve any final differences at this step. The Dean is reluctant to referee.

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Curriculum Proposals (Cont.): School to School

- Once approved by the Engineering Curriculum Committee, proposals are circulated by the VSOE Academic Programs Coordinator (Ann Langford, a.k.a. the Dean's Designee) via Curriculog to the Schools of any affected units. This step should be pro forma and the outcome pre-negotiated. Curriculog is a poor medium for negotiation.
- Proposals for new programs are circulated via Curriculog to the cognizant Vice Provost prior to submission to the Curriculum Office by the VSOE Academic Programs Coordinator.

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Curriculum Proposals (Cont.): School to University

- The School forwards the proposal via Curriculog to the University Curriculum Coordination Office (CCO) for discussion by the University Committee on Curriculum (UCOC).
  - It might be returned by CCO staff for changes after review.
  - If forwarded to the UCOC, any VSOE proposal is directed to the Science and Engineering Subcommittee (SES) to be
    - reviewed by either the Graduate or Undergraduate Co-chair, who might query the originating department.
    - reviewed by other subcommittee members as needed.

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Curriculum Proposals (Cont.): UCOC Meeting Schedule

- If approved by the SES, the proposal is placed on the consent calendar for the UCOC and will likely be approved.
- If discussion is required, it might be returned by the UCOC for changes or broader circulation to affected units.
- UCOC meetings are typically the first Wednesday of the month.
- Rule of thumb: Course proposals take one month for the UCOC to review. New programs and minors take two months to review.

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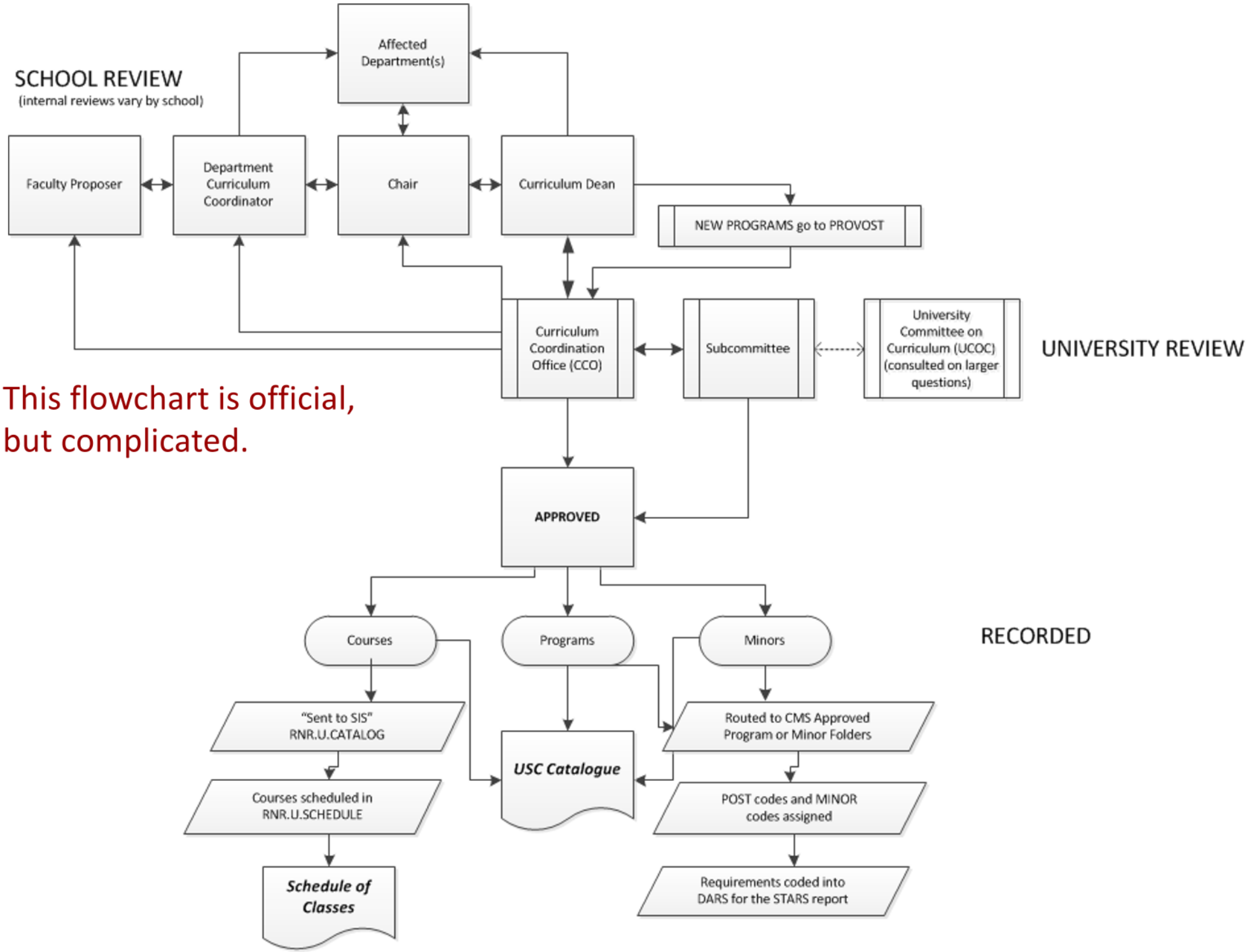
SCHOOL REVIEW
(internal reviews vary by school)
Affected Department(s)
Faculty Proposer
Department Curriculum Coordinator
Chair
Curriculum Dean
NEW PROGRAMS go to PROVOST
Curriculum Coordination Office (CCO)
Subcommittee
University Committee on Curriculum (UCOC) (consulted on larger questions)
UNIVERSITY REVIEW
This flowchart is official, but complicated.
APPROVED
Courses
Programs
Minors
RECORDED
"Sent to SIS" RNR.U.CATALOG
Routed to CMS Approved Program or Minor Folders
USC Catalogue
Courses scheduled in RNR.U.SCHEDULE
POST codes and MINOR codes assigned
Schedule of Classes
Requirements coded into DARS for the STARS report

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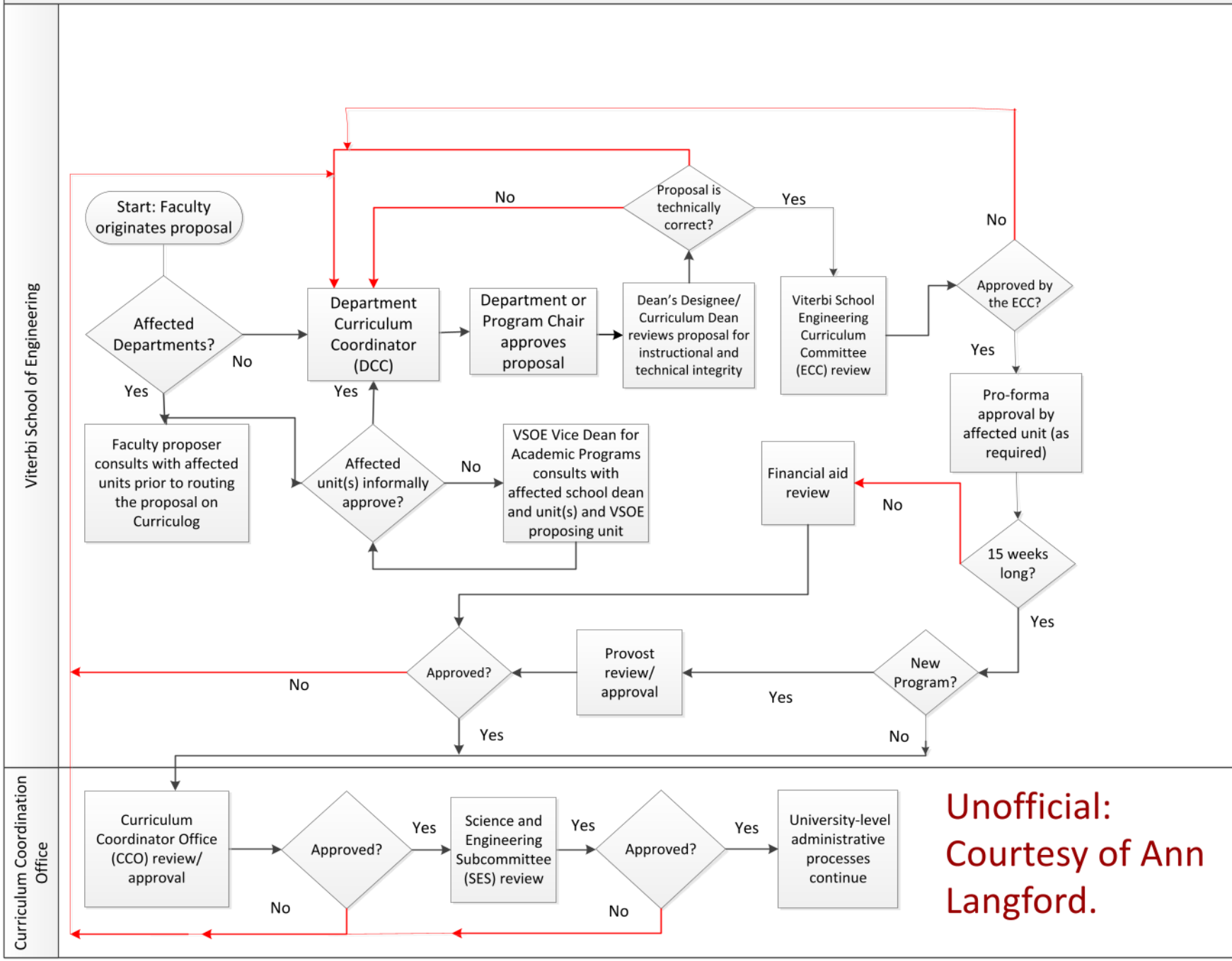
Curriculum Review/Approval Process



Unofficial: Courtesy of Ann Langford.

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Curriculum Proposals (Cont.): Crossing the Finish Line

- If the UCOC approves the proposal, then
  - This is reflected in the published minutes of the UCOC, which include the SES report, and are posted (eventually) at http://arr.usc.edu/services/curriculum/minutesandreports_current.html
  - The curriculum change is final when the Provost signs the minutes of the UCOC.
  - Catalogue text associated with the proposal is automatically loaded into the working copy of the 2018–19 Catalogue via *Acalog*. The USC Catalogue is solely online, but updates are not continuous: We maintain the concept of a catalogue year with respect to requirements.
  - Done!

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