

# ACCREDITING US SURVEYING PROGRAMS

FIG REGIONAL CONFERENCE  
MONTEVIDEO, URUGUAY

# ABET

- An international organization of professional societies who set accreditation standards and accreditation reviews of professional degree granting university programs
- Programs are accredited separately under general criteria set by ABET and under discipline specific criteria set by professional societies

# ABET

- Accredits over 3,100 programs
- Programs are located in over 660 universities
- 269 of the programs are in 55 universities in 22 countries outside the US

# ABET COMMISSIONS

- There are currently 4 ABET commissions:
  - Applied Science Accreditation Commission (ASAC)
  - Computing Accreditation Commission (CAC)
  - Engineering Accreditation Commission (EAC)
  - Engineering Technology Accreditation Commission (ETAC)

# ACCREDITATION PROCESS

- University must request accreditation, specifying which program(s) and under which commission(s)
- University can request accreditation of a single program by more than one commission (rare)

# ACCREDITATION PROCESS

- Universities can request program accreditation under more than one professional criteria
- Once the request is accepted (in January) the university must prepare a separate self-study report for each program (by July)

# ACCREDITATION PROCESS

- Self studies are assigned to a TEAM CHAIR (TC) who is a sitting member of the applicable commission
- The Team Chair is assigned one or more PROGRAM EVALUATORS (PEVs) for each program seeking accreditation by the professional society of the appropriate profession

# ACCREDITATION PROCESS

- If more than one commission is involved, then each commission will have its own team chair and program evaluators.
- The TC and PEV read the self-study and prepare for an onsite visit to the program(s)



# ACCREDITATION PROCESS

- Questions that might be answered prior to the onsite visit are normally handled by email and/or phone calls
- A 3 day onsite visit begins on Sunday afternoon and ends on Tuesday morning

# ACCREDITATION PROCESS

- On Day 0 (Sunday) the TC and PEV:
  - Meet the university and program representatives
  - Tour the classroom and lab facilities
  - Review course materials, student work and textbooks

# ACCREDITATION PROCESS

- At the end of Day 0 the TC and PEVs meet and discuss their observations and findings
- Normally done at a working dinner
- Preliminary evaluation reports are written or edited

# ACCREDITATION PROCESS

- On Day 1 (Monday) the TC:
  - Meets with Program Head
  - Meets with the Dean of the College
  - Meets with the Provost
  - Meets with the Career Placement Office
  - Meets with other appropriate support personnel

# ACCREDITATION PROCESS

- On Day 1 (Monday) the PEV:
  - Meets with program faculty
  - Meets with students
  - Meets with the program advisory committee
  - Observes a class activity (lecture, lab, etc.)

# ACCREDITATION PROCESS

- At the end of Day 1, the TC and PEV(s) meet and discuss their findings
- Preliminary evaluation reports are further edited and reviewed for unanswered concerns or questions

# ACCREDITATION PROCESS

- On Day 2 the TC and PEV follow up on any remaining concerns or questions
- The PEV completes the editing of his or her preliminary evaluation and submits it to the TC who prepares an Exit Statement containing all of the evaluations

# ACCREDITATION PROCESS

- One Day 2 the TC and PEV meet with the College Dean, Department Chair and/or Program Coordinator to give their evaluation findings
- At about noon on Day 2 the TC and PEVs will meet with the university president or provost and once again give their final evaluation findings



# ACCREDITATION PROCESS

- The TC will leave a copy of the evaluation sheet (but not the report) with the university at the end of the final meeting
- The TC will prepare or edit a Draft Statement to the university concerning the accreditation findings

# ACCREDITATION CRITERIA

- 1) Students
- 2) Program Educational Objectives
- 3) Student Learning Outcomes
- 4) Continuous Improvement Process

# ACCREDITATION CRITERIA

- 5) Curriculum
- 6) Faculty
- 7) Facilities
- 8) Institutional Support

# CRITERION 1: STUDENTS

- Processes for accepting new and transfer students
- Evidence of student advising and monitoring
- Evidence of career

## CRITERION 2: PROGRAM EDUCATIONAL OBJECTIVES

- 1) Written objectives available for public review
- Input from program constituencies, including those hiring graduates
- In compliance with institutional objectives

## CRITERION 2: PROGRAM EDUCATIONAL OBJECTIVES

- Written process for review and revision (if necessary) of objectives
- Compliance with educational objectives
  - Normally demonstrated by graduate achievements 3 to 5 years after graduation

# CRITERION 3: STUDENT LEARNING OUTCOMES

- Learning outcomes are demonstrated before student graduation from the program
- Must comply with ABET a to k learning outcomes
- Normally measured by student projects and examinations

# CRITERION 3: STUDENT LEARNING OUTCOMES

- Can be measured through national exams (e.g. NCEES Fundamentals of Surveying exam)
- Metrics should concentrate on students achieving acceptable outcomes
- Review and input from constituencies is helpful



# CRITERION 4: CONTINUOUS IMPROVEMENT

- Program must demonstrate how program objectives and student outcomes are reviewed and used to continuously improve the program
- Review and input from constituencies is critical

# CRITERION 5) CURRICULUM

- Curriculum must be ABET commission general criteria and commission specialty criteria submitted by the professional society overseeing the program specialty (e.g. surveying)

# CRITERION 5) CURRICULUM

- May require certain mathematics and science coursework
- Program must demonstrate how the curriculum builds on courses to allow students to graduate and achieve educational objectives

# CRITERION 6: FACULTY

- Faculty must be qualified by education, experience and/or licensure or certification
- Faculty specialties must cover all parts of the curriculum
- Faculty must have control of the curriculum

# CRITERION 7: FACILITIES

- Classrooms, lab rooms and faculty offices must be adequate to promote learning
- Equipment must be appropriate and maintained in good working order
- Students must have adequate access to computers, libraries and other needed resources

# CRITERION 8: INSTITUTIONAL SUPPORT

- The institution (e.g. university) must show that it has the necessary resources to ensure the continuity and quality of the program
- Must show it has the ability to attract and retain qualified faculty and technical support

# ACCREDITATION ACTIONS

- After the accreditation process is completed, each commission votes on actions:
  - No deficiencies or weaknesses – NGR
  - One or more weaknesses – IR or IV
  - One or more deficiencies
    - If an existing program – IR or IV
    - If a recurring problem – SCR or SCV
    - If an new program seeking 1<sup>st</sup> accreditation - NA

# CURRENTLY ACCREDITED US SURVEYING PROGRAMS

- Engineering (EAC) Commission (6):
  - California State Polytechnic University, Pomona
  - California State University, Fresno
  - Ferris State University (Michigan)
  - Florida Atlantic University
  - New Mexico State University
  - Penn State University, Wilkes-Barre



# CURRENTLY ACCREDITED US SURVEYING PROGRAMS

- Applied Science (ASAC) Commission (9):
  - East Tennessee State University
  - Nicholls State University (Louisiana)
  - Oregon Institute of Technology
  - Southern Polytechnic University (Georgia)
  - St Cloud University (Minnesota)
  - Texas A&M University, Corpus Christi

# CURRENTLY ACCREDITED US SURVEYING PROGRAMS

- Applied Science (ASAC) Commission (cont):
  - The University of Akron (Ohio)
  - Troy State University (Alabama)
  - University of Florida

# CURRENTLY ACCREDITED US SURVEYING PROGRAMS

- Technology (TAC) Commission (4):
  - Alfred State College (New York)
  - Idaho State University
  - New Jersey Institute of Technology
  - University of Maine

# ADVANTAGES OF ACCREDITATION

- Uniformity on quality of surveying education
- Compliance with state licensure education requirements
- Continuous improvement of surveying education

# CONCLUSIONS

- 20 US surveying programs are accredited under ABET
- Accreditation uses volunteers from academia and industry

# CONCLUSIONS

- Accreditation helps surveying programs to receive adequate institutional support
- Accreditation requires demonstration of education quality and continuous improvement
- Accreditation demonstrates that graduates are achieving objectives and promoting the health of the surveying profession

# QUESTION

- Is there an FIG Commission 2 role to promote the practices in the ABET accreditation process?