Chemical Engineering Program Graduate BYLAWS

Table of Contents

I Objectives	2
II Membership	2
A. Campus Participation	2
B Graduate Faculty participation and roles	3
C Disciplinary Expertise	3
D. Faculty Roles	3
a. WSU Tenured/Tenure Track Faculty in the Voiland School of Chemical Engineering and Bioengineering (VSCEB)	3
b. WSU Tenured/Tenure Track Faculty not in VSCEB	3
c. WSU Career Track Faculty in VSCEB	3
d. WSU Career Track Faculty not in VSCEB	4
E. Approval of Membership	5
III Administration	7
IV Committees	8
V Graduate Student Advisory Committees	9
VI Graduate Faculty Meetings	9
VII Quorum	9
VIII Amendments to Program Bylaws	10
IX Initial Chemical Engineering Graduate Faculty Participants:	11

Front Matter

Program: Chemical Engineering

Administrative home of the Program:

Voiland School of Chemical Engineering and Bioengineering, Washington State University (WSU), Pullman Campus

Date last approved by Faculty:

February 7, 2024

<u>I Objectives</u>

A. Degrees offered: PhD Chemical Engineering, MS Chemical Engineering

B. Discipline: Edgar, et al.¹ provide a succinct description of chemical engineering: "chemical engineers seek to understand, manipulate, and control the molecular basis of matter, and the molecular-level processes (physical, chemical, and biological) that underlie observed phenomena in nature and technology. The chemical engineer leverages knowledge of molecular processes across multiple length and time scales to synthesize and manipulate complex systems that encompass both processes and products." The National Research Council further clarifies the goal of chemical engineering research when noting that "The chemical sciences will unlock our ability to understand the mysteries of our world—from new synthesis and catalysis to life itself. The chemical sciences will produce answers to our future energy needs and environmental challenges. The chemical sciences will produce the materials of the future, and they will produce practical biotechnology from biology. The central challenge will be to create new understanding of our existing and potential physical world, and to use that understanding to produce a better world."²

C. Mission of the Program: To educate and develop leaders who leverage the knowledge of molecular processes to synthesize and manipulate complex processes and enable new products.

<u>II Membership</u>

A. Campus Participation

The M.S. and Ph.D. degrees in Chemical Engineering are offered through the Pullman campus of Washington State University as formally approved and authorized by the appropriate accrediting body for Washington State University (e.g. NWCCU). The Faculty at other campuses and extension sites participate in this program but have not been officially approved and authorized to independently advertise and offer either the M.S. or Ph.D. degree.

¹ Edgar, T.F., B.A. Ogunnaike, J.J. Downs, K.R. Muske, and B. W. Bequette, "Renovating the undergraduate process control course", *Computers and Chemical Engineering* **30**:1749-1762, 2006 ² National Research Council Committee on Challenges for Chemical Sciences in the 21st Century, Board on Chemical Sciences and Technology, "Beyond the Molecular Frontier: Challenges for Chemistry and Chemical Engineering", National Academies Press, Washington, DC, 2003.

B Graduate Faculty participation and roles

Graduate Faculty within the Chemical Engineering program may be **WSU tenured and tenure-track faculty, WSU career track faculty**, and **WSU adjoint/adjunct** or **affiliate faculty** (see WSU Faculty Manual for definitions etc.), subject to the limitations and definitions in this document. Graduate Faculty designated as initial Chemical Engineering Program Graduate Faculty (listed in Section IX of this document) will be approved when new bylaws are approved by the Faculty Senate. Graduate Faculty subsequently added to the program via the process outlined in section II below are approved by the Graduate School. The Graduate Faculty are led by a Program Director. As defined in section III below, the Director of the Voiland School of Chemical Engineering and Bioengineering also serves as the Director of the Chemical Engineering Graduate Program.

Graduate Faculty participation in Chemical Engineering is independent and separate from academic department, school, college, campus, or extension site affiliations.

C Disciplinary Expertise

All Graduate Faculty in the Chemical Engineering Program must have roles that align with current Washington Administrative Code Regulations (WAC 250-61-100).

Graduate faculty within the Chemical Engineering program must have a Ph.D. or equivalent terminal degree (such as ScD, Dr.-Ing. etc.) in Chemical Engineering or a field closely related to chemical engineering. In addition, they must have demonstrated disciplinary expertise in mentoring and teaching of graduate students in this field, and must have relevant professional accomplishments such as for example peer reviewed publications, granted patents, and industrial experience. Graduate Faculty at the assistant level is exempt from the requirement for demonstrated expertise in mentoring and teaching of graduate students.

Chemical Engineering Graduate Faculty must be actively involved in research related to Chemical Engineering, as defined in section I. Evidence for such involvement includes recent external competitive grant- or contract support (for example from the U.S. Department of Energy, U.S. National Science Foundation, U.S. Department of Agriculture, U.S. National Institutes of Health, etc.), related peer-reviewed publications, graduate student mentoring, teaching of relevant graduate level courses, or other relevant professional accomplishments within the last five (5) years.

Graduate Faculty that do not satisfy the above disciplinary requirements may be approved for participation through a nomination memo and curriculum vitae forwarded by the Chemical Engineering Program Director to the Vice Provost for Graduate and Professional Education for approval.

D. Faculty Roles

See the WSU Faculty Handbook for definitions of Tenure/Tenure Track Faculty, Career Track Faculty etc.

a. WSU Tenured/Tenure Track Faculty not in the VSCEB

Tenured/Tenure Track Faculty not in VSCEB who are approved Chemical Engineering Program Graduate Faculty, are entitled to act as chair, co-chair, or member of graduate student advisory committees, and teach graduate courses. They may not serve as Program Director nor on Chemical Engineering Program committees. They are not voting eligible.

b. WSU Career Track Faculty in the VSCEB

Career Track Faculty are entitled to act as co-chair or as a member of graduate student advisory committee, teach graduate courses, and serve on all Chemical Engineering Program Committees. They are voting

eligible.

c. WSU Career Track Faculty not in the VSCEB

WSU Career Track Faculty not in the VSCEB are entitled to act as co-chair or member of graduate student advisory committees and teach graduate courses. They cannot serve as Program Director or serve on Chemical Engineering Program committees. They are not voting eligible. They cannot chair student advisory committees and when serving as co-chair, they must co-chair with a Tenured/Tenure Track Faculty member in VSCEB who is also a member of the Chemical Engineering Graduate Faculty.

d. WSU Adjoint or Adjunct Faculty

Adjoint and Adjunct faculty who are approved as Chemical Engineering Graduate Faculty are entitled to act as chair, co-chair, or as member of graduate student advisory committees and teach graduate courses. They may not serve as Program Director nor on Chemical Engineering Program committees. They are not voting eligible.

e. Adjoint or Adjunct Faculty not at WSU

Adjoint and Adjunct faculty appointed to WSU who are approved as Chemical Engineering Graduate Faculty are entitled to act as chair, co-chair, or as member of graduate student advisory committees and teach graduate courses. They may not serve as Program Director nor on Chemical Engineering Program committees. They are not voting eligible.

f. VSCEB Emeritus Faculty

Retired Voiland School Faculty who receive Emeritus appointments may complete current terms as chairs of graduate student advisory committees for a student who will graduate within two (2) semesters of retirement and may transition to co-chair or members of ongoing graduate student advisory committees for students who will require additional time to graduate. They can serve as committee members for students who begin chemical engineering graduate studies subsequent to their appointment as Emeritus Faculty. They may not serve as Program Director nor on Chemical Engineering Program committees. They are not voting eligible. Except as noted above, they cannot chair student advisory committees and when serving as co-chair, they must co-chair with a Tenure Track Faculty member in the Voiland School of Chemical Engineering and Bioengineering who is also a member of the Chemical Engineering Graduate Faculty, as defined above.

g. Individuals who are not Graduate Faculty in VSCEB

Individuals who are not Graduate Faculty in the Chemical Engineering Program: Individuals not officially participating as Graduate Faculty within the Chemical Engineering Program may serve on graduate student advisory committees as outlined here:

i. Faculty who are members of the Graduate Faculty in another WSU graduate program, whose committee appointment is approved by the Program Director of the Chemical Engineering Program, may serve on a graduate student's advisory committee. They have no additional rights or responsibilities in the Chemical Engineering Program

ii. Individuals not officially participating as Graduate Faculty in any Graduate Program at WSU (for example, a faculty member from another university or research entity) may be approved to serve as a member for an individual student's advisory committee on a case-by-case basis. The committee chair for that student should forward the name and a curriculum vitae (CV) of the desired committee member to the Chemical Engineering Program Director. With approval of the Program Director, the nomination memo (with accompanying CV or other documentation of expertise) is forwarded to the Vice Provost for Graduate and Professional Education for final approval. Such individuals have no additional rights or responsibilities

in the Chemical Engineering Program.

Table: Summary of Participation

The table below summarizes the roles and participation level as described above.

Professional Status	Chair	Co-	Student	Program	Voting
		Chair	Committee	Director or	Eligible
			Member	Program	
				Committee	
Tenured/Tenure-Track	Х	Х	Х	Х	Х
Faculty in VSCEB					
Tenured/Tenure-Track	Х	Х	Х		
Faculty not in VSCEB					
Career-Track in VSCEB		Х	Х		Х
Career-Track not in		Х	Х		
VSCEB					
Adjoint/Adjunct	X	Х	X		
Emeritus		Х	X		
All others			X (with		
			approval)		

E. Approval of Membership

All Tenured/Tenure-Track Faculty in the VSCEB are automatically approved Graduate Faculty in Chemical Engineering, entitled to act as chair, co-chair, and member of graduate student advisory committees, teach graduate courses, serve as Program Director, and serve on all Chemical Engineering Program committees. They are voting eligible.

- 1. Initial approved Graduate Faculty within Chemical Engineering Graduate Faculty are listed in Section IX of this document and have been approved by the Voiland School Graduate Faculty, the Chemical Engineering Program Director, and the Vice Provost for Graduate and Professional Education.
- 2. Candidates for Graduate Faculty participation within Chemical Engineering are nominated by an existing Chemical Engineering Graduate Faculty member or may self-nominate. The nominations should be sent to the Program Director and will include a letter of nomination, and curriculum vitae for the nominee. The Program Director will circulate application materials to all voting eligible Graduate Faculty prior to the vote. Once nominated, the nominee will meet with interested Chemical Engineering Graduate Faculty and provide a public

seminar describing their work that advances chemical engineering, as defined in section I) above. After the completion of these meetings and seminar, the Chemical Engineering Graduate Faculty will vote to approve Chemical Engineering Graduate Faculty status. New Graduate Faculty require approval from the majority of voting eligible Graduate Faculty who respond to the vote.

- 3. In addition to a commitment to maintain the highest standards of mentoring for graduate students, anticipated contributions or qualifications for all successful Graduate Faculty include one or more of the following:
- a. Appropriate Educational credentials as outlined in II.A.c.
- b. History or reasonable expectation of an active, funded research program that can plausibly be relied upon as the source of continuing support of Chemical Engineering graduate students.
- c. History of or willingness to participate as appropriate in administrative, teaching, and other functions of the Chemical Engineering graduate program. This may include serving on graduate program administrative committees; serving as a thesis or dissertation committee member or chair or providing graduate level instruction.
- d. History of publication of peer-reviewed manuscripts in archival journals that report results of work that advances chemical engineering, as defined in section I.
- B. Continuation of Membership: Graduate Faculty appointments to Chemical Engineering will be reviewed yearly by the Program Director. Each Graduate Faculty member will be evaluated for contributions to graduate instruction, research, and teaching. Contributions to the Chemical Engineering program shall be a requirement for continued active membership. Contributions may take the form of:
 - 1. Committee chair, co-chair or member of Chemical Engineering graduate student committees
 - 2. Teaching or co-teaching a graduate course in Chemical Engineering
 - 3. Supervising graduate student research
 - 4. Serving in the administrative and committee structure of Chemical Engineering
- C. Discontinuation of Membership
 - 1. Graduate Tenure Track and Career Track faculty who are employed by the VSCEB retain graduate faculty status for the duration of their appointment in the VSCEB.
 - 2. Affiliate, Adjoint and Adjunct Chemical Engineering Graduate faculty retain graduate faculty status for a 3 year term and will not be renewed without positive action. Such faculty who wish reappointment must contact the Program Director and request reappointment and include supporting information as described

C above. The voting faculty members must approve all such reappointments.

- 3. Jointly appointed faculty are appointed for the duration of their joint appointment.
- 4. In accordance with section III G.4 of the WSU Faculty manual, Emeritus faculty appointments will be reviewed at the beginning of each biennium or more frequently as needed. A majority of voting eligible faculty must support reappointment. Prior to the vote, the emeritus faculty member must provide supporting information as outlined C above.
- 5. Discontinuation of Membership:
- a. Initiation of Discontinuation: Upon request of at least three Chemical Engineering Graduate Faculty members individual membership can be discontinued by a vote of 75% of the faculty eligible to vote in the Chemical Engineering graduate program. If an appointment is to be discontinued, the Program Director must notify the faculty member that they have been discontinued from the program. If that individual's situation should change, they may reapply for Chemical Engineering Program faculty status at any time.
- b. Membership Appeal Process: Faculty appeal of any membership decision in the Chemical Engineering program must be made in writing to the Chemical Engineering Program Director within 30 calendar days of being notified of the discontinuation of membership. An appeal will only be granted if 75% or more of the voting eligible Chemical Engineering Graduate Faculty approve. Final written appeal may be made to the Vice Provost for Graduate and Professional Education within 30 calendar days of the Chemical Engineering graduate faculty vote.

III Administration

Administration of the program and its activities is vested in the Chemical Engineering Program Director with advice from the Chemical Engineering Graduate Studies Committee. The Director of the Voiland School of Chemical Engineering and Bioengineering will also serve as the Director of the Chemical Engineering Graduate Program.

Duties of the Program Director:

1. Provide overall academic leadership for Chemical Engineering

2. Develop and implement policies for Chemical Engineering representing the interests of Chemical Engineering to the campus and University administrators

3. Call and preside at meetings of the Chemical Engineering Graduate Faculty

4. Be responsible for coordinating all Chemical Engineering administrative matters with the Graduate School

5. Submit course or curriculum change or approval forms

6. Submit bylaws changes or approval forms

7. Be responsible for the accuracy of all publications related to Chemical Engineering including web pages and catalog copy

8. Coordinate Chemical Engineering graduate course teaching assignments

9. Supervise the activities of the Chemical Engineering Graduate Studies Committee as they relate to the program

10. Approve departmental recommendation forms

IV Committees

- A. Chemical Engineering Graduate Studies Committee: Coordinates and advises the Chemical Engineering Program Director in administering Chemical Engineering graduate programs.
 - 1. The Graduate Studies Committee shall be composed of three (3) to six (6) Graduate Faculty members of the Chemical Engineering Program. Graduate Faculty may nominate individuals for committee membership, and members are elected by a majority vote of the voting eligible Chemical Engineering Graduate Faculty in a confidential ballot. Members of the Graduate Studies Committee shall serve three (3) year, renewable terms.
 - 2. The Program Director shall serve as an *ex officio* member of the Graduate Studies Committee.
 - 3. The Graduate Studies Committee members shall select the committee chair from among their membership.
 - 4. The Graduate Studies Committee shall meet at least once a semester to discuss issues. It may meet more often as needed for special circumstances.
 - 5. The Graduate Coordinator shall record and distribute minutes of each meeting to the Graduate Studies Committee and maintain one copy in Program Records.
 - 6. Areas in which the Graduate Studies Committee shall assist and advise the Program Director include:
 - a. Review, develop and update long-range goals for Chemical Engineering programs and plans for their attainment
 - b. Serve as a sounding board for new ideas, changes, etc. in academic or administrative issues
 - c. Provide guidance on administration of the program
 - d. Assist with the Chemical Engineering program assessment process.
 - e. Assist with recruitment, scholarship applications, graduate awards, graduate student review and exceptions to policy.
 - f. Work with the Academic Coordinator to develop and maintain recruiting materials as required.
 - g. Oversee all graduate student recruitment policies.
 - h. Regular (at least annual) review of the curriculum.
- B. Other Chemical Engineering Program Committees: Other ad hoc committees may be appointed by the Graduate Studies Committee and Program Director as needed.

Addition of new, or changes to the existing standing committees must be approved by amendment of bylaws.

V Graduate Student Advisory Committees

A. The initial selection, or subsequent changes, of a graduate student's committee shall be determined jointly by the student and the student's advisor in accordance with the policy and procedures outlined in the Chemical Engineering graduate handbook at the time the student first enrolls in the chemical engineering program for which they are seeking a degree.

B. The graduate committee of each student shall have a minimum of three individuals who are members of the Chemical Engineering Graduate Faculty. At least 2 committee members must be tenured, or tenure-track members of the Voiland School faculty. All committee members must hold a degree of comparable or higher level compared to the degree sought by the candidate.

C. Graduate students are not permitted to serve on the committees of other graduate students.

VI Graduate Faculty Meetings

- **A.** The Chemical Engineering Program Director shall call Chemical Engineering Graduate Faculty meetings as needed at least once per academic year. All attempts will be made to provide a written agenda two days in advance.
- **B.** Other meetings may be called at the discretion of the Program Director or the Chair of the Graduate Studies Committee.
- **C.** A special meeting of the Chemical Engineering Graduate Faculty may be called by petition of 25% or more of the voting eligible Graduate Faculty members.
- **D.** Efforts will be made to communicate items of interest, including notification of a Graduate Faculty Meeting, to faculty via email.
- **E.** Chemical Engineering program faculty may participate in Graduate Faculty meetings in person or via electronic means.

VII Quorum

- **A.** For all general Graduate Faculty Meetings, unless otherwise indicated, a quorum shall be defined as a minimum of 60% of the Chemical Engineering Program voting eligible membership.
- **B.** For other Chemical Engineering Program Committees to conduct a business meeting, a quorum shall be defined as a minimum of 60% of the committee membership, including any *ex officio* members.
- **C.** A majority of attendees is needed to pass motions. Unless otherwise indicated, a majority refers to more than 50% of the votes cast by voting eligible faculty members.

VIII Amendments to Program Bylaws

A. The Program Bylaws document shall be reviewed every fifth year by the Chemical Engineering Graduate Studies Committee and annually by the School Director.

B. Amendments to the Bylaws may originate from any eligible Chemical Engineering Graduate Faculty Member. Proposed amendments must be forwarded to the Chemical Engineering Graduate Studies Committee and Program Director. After discussion by the Chemical Engineering Graduate Studies Committee, amendments shall be forwarded to the Chemical Engineering Graduate Faculty electronically at least 2 weeks prior to the faculty meeting at which the amendments will be discussed and may include a recommendation by the Graduate Studies Committee. Votes on amendments may occur at a faculty meeting or electronically. Amendments to the Chemical Engineering Bylaws require a positive vote from the majority of all active Chemical Engineering Graduate Faculty.

C. All amendments and revisions must be submitted to the WSU Graduate Studies Committee and Faculty Senate for review and final approval.

IX Initial Chemical Engineering Graduate Faculty Participants:

A. Voiland School Tenured/Tenure Track Faculty, Program: Chemical Engineering

ii.	Beyenal, Haluk	xi.	Scalise, Dominic
iii.	Chang, Qiaowan	xii.	Schulz, Kirk
iv.	Dong, Wenji	xiii.	Van Wie, Bernard J.
v.	Ha, Su	xiv.	Vasavada, Anita
vi.	Kostyukova, Alla	XV.	Wang, Yong
vii.	Lin, David	xvi.	Wu, Di
viii.	Lin, Hongfei	xvii.	Zhang, Xiao
ix.	McEwen, Jean-Sabin		

WSU Tenure/Tenure Track Faculty with tenure home in other WSU units (Affiliate Faculty)

- i. Bell, Jeffrey (CHEM)
- ii. Garcia-Perez, Manuel (BSE) v.
- iii. Gozen, Arda (MME)

Non-tenure Track Faculty Internal to WSU

- i. Lehman-Chong, Colin iii. Tolkatchev, Dmitri
- ii. Thiessen, David

i.

Ahring, Birgitte

Non-tenure Track Adjunct Faculty, External to WSU (Adjunct/Adjoint)

- i. Babauta, Jerome (Gamry)
- ii. Dohnalek, Zdenek (PNNL)
- iii. Heldebrant, David (PNNL)
- iv. Hu, Jian Zhi (PNNL)
- v. Madbouly, Samy (PNNL)
- vi. Prabhakaran, Venkateshkumar (PNNL)
- vii. Ramasamy, Karthikeyan (PNNL)

- viii. Renslow, Ryan (Totus Medicines)
- ix. Thorson, Michael (PNNL)
- Wang, Huamin (PNNL) х.

iv.

Saunders, Steven R.

- Guo, Xiaofeng (CHEM)
- Lin, Yuehe (MME)
- Tanner, Bert (IPN) vi.

x.