

**Coaching and Training Module:
Tenure and Promotion in Interdisciplinary Research and Team Science**

The Coaching and Training Modules are designed to help individuals and groups learn about key aspects of interdisciplinary research and team science. Individuals may use them as self-tutorials. Program directors, project managers, and advisors may use them for coaching, and they may form the basis for workshops and short courses.

Additional modules on this website focus on barriers and strategies for change, training, collaboration, and evaluation.

When respondents to preliminary surveys for the 2004 National Academy of Sciences (NAS) report on *Facilitating Interdisciplinary Research** were asked to rank the top five impediments to interdisciplinary research on their campuses, tenure and promotion criteria received the highest percentage, followed by budget, strategic plans, and space. This finding affirms a widely held belief that despite growing endorsement of interdisciplinary research, a gap persists in the academic reward system. The discrepancy is compounded by an increase in team science, which is often interdisciplinary in nature. As a result, individuals face double marginalization. They are judged by discipline-based standards, and their contributions to collaborative research are minimized or discounted. Fortunately, a variety of resources inform this crucial stage of the career life cycle. This module highlights key materials with suggestions on how to use them for designated purposes. (*Washington, D.C.: The National Academies Press, pp. 73, 76).

Introductions

Klein, J. T. (2012). "Monitoring the Interdisciplinary Career." In J. Gaff and J. Ratliff (Eds.). *Creating Interdisciplinary Campus Cultures* (pp. 127-151). San Francisco: Jossey Bass and Association of American Colleges and Universities.

An overview of hiring, tenure and promotion, and faculty development that synthesizes insights from separate accounts including the NAS report on *Facilitating Interdisciplinary Research*, the CEDD guidance document (below), examples from individual campuses and the literature on interdisciplinarity, and a 2006 meeting on Quality Assessment in Interdisciplinary Research and Education held at the American Association for the Advancement of Science.

- Entire chapter or sections may be read for introductory overviews by individuals or groups.
- Two reprinted exhibits from the CEDD guidance document offer models for coaching the job search and dossier preparation for tenure and promotion: the "Checklist for Annotating an Interdisciplinary Curriculum Vita" and the model for negotiating a letter of agreement, the "Interdisciplinary MOU Checklist."
- The table of "Strategies for Interdisciplinary Faculty Development" may guide planning at all stages of the career life cycle in both formal and informal activities.

Presentation on “Literature Review on Promotion and Tenure Policies.” Workshop on Institutional and Organizational Support for Team Science. Washington, D.C.: National Academies of Science, 24 October 2013. J. T. Klein on behalf of National Institutes of Health Tenure and Promotion research group with A. Banacki, H. Falk-Krzesinski, K. Hall, L. M. Bennett, and H. Gadlin.

Power Point slides and accompanying handout of Talking Points from a preliminary literature review covering the following topics: the shared impetus and challenges of interdisciplinarity and team science, barriers and disincentives for promotion and tenure, strategies and models for creating a culture of reward, pre-tenure and tenure review committees, dossier preparation, a model for incentivizing collaborations and impacts, and expanding criteria of evaluation beyond proxy measures.

- Handout and/or slides may be adapted for presentations in their entirety or as subtopics.
- Handout and/or slides may be coupled with selected readings from annotated bibliographies also on this website.

These materials do not require formal copyright permission. However, users should include a proper citation credit. Both handout and slides available upon request from J. T. Klein at ad5820@wayne.edu

See also additional resources for reading, presentations, and workshops on team science: Agenda, webcast, and materials of entire Workshop on Institutional and Organizational Support for Team Science at http://sites.nationalacademies.org/dbasse/bbcss/dbasse_085236

Agenda, webcast, and materials of prior workshop on Science Team Dynamics and Effectiveness, 1 July 2013: at http://sites.nationalacademies.org/dbasse/bbcss/dbasse_083679

See also OVPR-Professional and Academic Development Seminar [PAD] Series, Wayne State University: “Navigating Interdisciplinary Careers.” 22 February 2013. At PAD Seminar series link on OVPR <http://research.wayne.edu/seminars-training/seminar-series.php>

A panel presentation covering stages of career development, strategies for tenure and promotion, student mentor-collaborator roles in skills development and interdisciplinary research, and strategies for multiple careers.

Link includes agenda and a downloadable copy of J. T. Klein’s introductory overview of key publications and questions from Graybill and Shandas (below). Introductory handout may be adapted for presentations; for copy of the accompanying Power Point, contact Klein directly at ad5820@wayne.edu

Presenters in their interdisciplinary capacities:

Julie Thompson Klein, Faculty Fellow for Interdisciplinary Development in OVPR
Margaret Winters, Interim Provost and Senior Vice President for Academic Affairs
Christy Chow, Associate Dean for Research and Graduate Studies
Ken Jackson, Interim Associate Dean of the Graduate School

Guidelines and Lessons from Experience

Council of Environmental Deans and Directors [CEDD]. *Interdisciplinary Hiring And Career Development: Guidance For Individuals And Institutions.* (2011). <<http://www.ncseonline.org/interdisciplinary-hiring-and-career-development-guidance-individuals-and-institutions>>. Available free for University affiliates of the CEDD.

The first overview of the interdisciplinary career life cycle. Describes six stages with models, sample documents, and lessons.

- May be used individually or jointly at particular stages or for comprehensive planning and review.

- **Stage 1. Structural Considerations:** Institutions and search committees may use prior to the hiring process to assess local conditions for hiring, resources, and readiness to support the needs of interdisciplinary candidates.

- **Stage 2: Position Creation and Institutional Acceptance:** Administrators and search committees may use for writing position descriptions and performance expectations, while fostering consensus about goals. Includes specification for joint appointments and sample Memorandum of Understanding (MOU) in appendix.

Stage 3: Search and Hiring: All parties to the search process may use to establish the hiring process and expectations, including different logistics of units such as hiring timelines, scheduling of campus visit, and formats for candidate presentations.

Stage 4: Early-Career Scholar Development: Pre-tenure review committees, administrators, mentors, and candidates may use to define expectations for interdisciplinary scholarship and publication, including networking costs of collaborative projects, assessing contributions to multi-authored publications, and other support for research, education, and travel.

Stage 5: Reviews and Tenure: Pre-tenure review committees, administrators, mentors, and candidates may use to establish appropriate criteria for interdisciplinary and collaborative work, dossier preparation, and evaluation process. Includes model for an annotated CV in appendix and special guidance to letter writers.

Stage 6: Senior Career Development: Administrators and faculty may use to facilitate resources and rewards, including merit pay and professional development funds as well as senior faculty involvement in leadership roles.

Pfirman, S., and Martin, P. (2010). "Facilitating Interdisciplinary Scholars." In R. Frodeman, J. T. Klein, and C. Mitcham (Eds.). *The Oxford Handbook of Interdisciplinarity* (pp. 387-403). Oxford, Oxford University Press.

An expository overview of topics raised in the CEDD document on *Interdisciplinary Hiring And Career Development*. Includes explanations of characteristics associated with disciplinary and interdisciplinary research and education, modes of conducting research and teaching, positive and negative aspects, spectrum of commitment and investment, recognition, and funding.

- May be used for introductory reading by individuals and groups to frame related topics.

Graybill, J. and. Shandas, V. (2010). "Doctoral Student and Early Career Academic Perspectives." In R. Frodeman and C. Mitcham (Eds.). *The Oxford Handbook of Interdisciplinarity* (pp. 404-418). Oxford, Oxford University Press.

Covers stages of the career life cycle from graduate school through junior faculty stage.

- Faculty, mentors, and unit committees may use the checklists and explanations of questions for all stages when advising individuals or for group orientation in career workshops.

Stage 1: Initiation includes questions for graduate students aimed at situating their interdisciplinary scholarship, establishing personal identity in disciplinary departments, and strategizing multiple projects for maximum benefits, timely completion, and rigor and acceptability in both disciplinary and interdisciplinary contexts.

Stage 2: Familiarization includes questions for graduate students aimed at maintaining rigor and depth in both disciplinary and interdisciplinary research, timely completion of Ph.D., understanding what counts as legitimate amounts and types of research in disciplinary and interdisciplinary fields, deciding where to publish and implications for hire-ability, and describing benefits and value of interdisciplinary training to scholars in disciplinary units.

Stage 3: Adaptation includes questions for early career hires aimed at introducing and promoting a personal vision for interdisciplinarity in a new institution and/or department, navigating risks of interdisciplinary research or pedagogy in tenure process, introducing new pedagogical techniques that incorporate interdisciplinarity in pre-tenure phase, identifying shared related commitments and interests, and managing time commitments to building collaborations on new campuses when pre-apportioned for research, teaching and service.

Stage 4: Protected Enthusiasm includes questions for early career academics focused on representing individual identity as a disciplinarian and interdisciplinarian with dual agendas, internal and external reviewers for promotion, as well as weighing institutional risks in pre-tenure years, maintaining enthusiasm for interdisciplinarity in new institutions that may be less conducive than one's doctoral university, building bridges with new institution or maintaining them with external collaborators with similar training, and challenging or changing the new institution's views and practices of interdisciplinarity.

Lyall, C., Bruce, A., Tait, J., and Meagher, L. (2011). “Charting a Course for an Interdisciplinary Career.” *Interdisciplinary Research Journeys: Practical Strategies for Capturing Creativity* (pp. 103-136). London, Bloomsbury Academic. In addition to purchase of print text, copies of individual sections may be viewed online free at <http://www.bloomsburyacademic.com/view/Interdisciplinary-Research-Journeys/book-ba-9781849661782.xml>

A detailed overview based on literature review and experience managing interdisciplinary research in the UK. Includes key topics of team-building, capacity-building, research development, management and evaluation with examples from social and natural sciences.

• All parties may use overviews and accompanying short case studies, advice boxes, and reflection questions for individuals and teams at all levels and stages of design, development, management, and evaluation. Chapter 6, “Charting a Course for an Interdisciplinary Career” (pp. 103-36), focuses on establishing and sustaining interdisciplinary careers within and beyond universities with the following topics for use by individuals and groups:

- types of interdisciplinary careers over time
- differences between collaborative and individual interdisciplinarity
- career risks and benefits
- adding value to different career dimensions and understanding personal motivations
- Ph.D supervision
- knowledge exchange and consulting
- careers beyond academia
- personal career development strategy and sample interdisciplinary career profiles
- a reflection guide for contemplating an interdisciplinary career

See also the Barriers and Strategies module on this OVPR website link for IDR for more details on how to use this book for institutional change.

Further Reading and Other Resources

For a compilation of publications on P&T, join the Science of Team Science group at Mendeley (<http://www.mendeley.com/groups/3556001/science-of-team-science-scits/>)
