



## Individual Development Plan Guidelines for Postdoctoral Scholars

**Individual Development Plans (IDPs)** provide a planning process that identifies the Postdoctoral Scholar's general individual research goals, professional development and career objectives and can also serve as a communication tool between postdoctoral scholars and their PIs (supervisors/faculty mentors).

### Goals

Help postdocs identify:

- Long-term career options they wish to pursue and the necessary tools to meet these; and
- Short-term needs for improving current performance

### Benefits

Postdocs will have a process that assists in developing long-term goals. Identifying short-term goals will give them a clearer sense of expectations and help identify milestones along the way to achieving specific objectives. The IDP also provides a tool for communication between the postdoc and the PI.

### Outline of IDP Process

The development, implementation and revision of the IDP require a series of steps to be conducted by the postdoc and their PI. These steps are an interactive effort and require that both parties participate fully in the process.

## BASIC STEPS

### *... for Postdoctoral Scholars*

- Step 1: Conduct a self-assessment
- Step 2: Survey opportunities with PIs
- Step 3: Fill out an IDP form, share IDP with PI and revise
- Step 4: Implement the plan and revise the IDP as needed

### *... for PIs*

- Step 1: Assess postdoc
- Step 2: Discuss opportunities with postdoc
- Step 3: Review IDP and help revise
- Step 4: Establish regular review of progress and help revise the IDP as needed



## EXECUTION OF THE IDP PROCESS

### Postdoctoral Scholar

#### **Step 1 - Conduct a Self-Assessment (attached):**

- Assess your skills, strengths and areas which need development
- Ask you mentor/advisor to assess your skills and compare with you self-assessment
- Identify what you feel you have mastered and what skills, knowledge and experiences you believe you need to acquire in order to advance your career
- Outline your long-term career objectives. Ask yourself:
  - What type of work would I like to be doing?
  - Where would I like to be in an organization?
  - What is important to me in a career?

This self-assessment tool is not to rate you and provide a score; it is intended to be used as a working document to help initiate and direct the communication between you and your PI. It provides a bulleted list/description of skills, knowledge and experiences you have either acquired or wish to acquire to address the discipline-specific needs contained within each category. The success is dependent upon your ability to articulate each bulleted item clearly and be able to identify the broader concepts in the context of the lab's current objectives or future goals. By keeping the assessment in terms of tangible goals, the development plan will have clear objectives that both you and your PI can acknowledge and assess as research advances in the lab. Therefore, your professional development may advance while your expected research, teaching and or laboratory responsibilities are also met.

While it is understood that the experiences and demands towards your development are heavily directed by the expectations specific to your field of research, there are some general concepts and topics that provide a universal starting point. This document starts the self-assessment from a more general framework, but you are strongly encouraged to alter or augment it to better suit the specific needs and demands of your discipline in conjunction with your PI.

#### **Step 2 – Survey Opportunities with PI.**

- **Identify** career opportunities and select from those that interest you.
- **Identify** developmental needs by comparing current skills and strengths with those needed for your career choice
- **Prioritize** what you feel are the most-to-least important items you would like to work on as a postdoc.
- **Solicit** feedback and discussion from your PI; does the assessment cover all relevant aspects specific to the discipline and your professional development?



### Step 3 - Write an IDP.

The IDP maps out the general path you want to take and helps match skills and strengths to your career choices. It is a changing document, since needs and goals will almost certainly evolve over time as a postdoc. The aim is to build upon current strengths and skills by identifying areas for development and providing a way to address these. The specific objectives of a typical IDP are to:

- Establish effective dates for the duration of your postdoctoral appointment.
- Identify specific skills and strengths that you need to develop (based on discussions with your PI).
- Review the professional development resources offered at UCI.
- Define the approaches to obtain the specific skills and strengths (e.g., courses, technical skills, teaching, and supervision) together with a timeline.
- Discuss your draft IDP with your PI.
- Revise the IDP as appropriate.

### Step 4 - Implement Your Plan.

The plan is just the beginning of the career development process and serves as the road map. Now it is time to take action!

- Put your plan into action.
- Revise and modify the plan as necessary. The plan is not cast in concrete; it will need to be modified as circumstances and goals change. The challenge of implementation is to remain flexible and open to change.
- Review the plan with your PI regularly. Revise the plan on the basis of these discussions.

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### Self-Assessment Guidelines

The following self-assessment questions are aligned with the six general categories adapted from the National Postdoctoral Association's Postdoctoral Core Competency Toolkit

<http://www.nationalpostdoc.org/?CoreCompetencies> to assist postdoctoral scholars in developing and acquiring these six competencies:

- 1) Discipline-Specific Knowledge
- 2) Research Skill Development
- 3) Communication Skills
- 4) Professionalism
- 5) Leadership and Management Skills
- 6) Responsible Conduct of Research

The questions included under each heading may not be universally relevant to all postdocs or specific disciplines of research. They have been included here merely as a starting point to help develop the self



assessment based on your own skills and experiences, and ultimately to provide a concrete, directed basis to foster discussion with your PI toward the further advancement and development of you as a postdoc. You are strongly encouraged to edit and/or insert additional questions that may fall under each of these categories that would be more reflective of the demands and challenges specific to your field of research.

### **Competency 1- Discipline-Specific Knowledge**

Postdoctoral scholars are expected to demonstrate a broad base of established and evolving knowledge within their discipline and detailed knowledge of their specific research area. They should understand the gaps, conflicts, limits, and challenges within their research area such that they can develop testable hypotheses. A broad knowledge base also provides an excellent foundation for those individuals who pursue non-bench related professions.

#### Delineation of Specific Skills

- Analytical approach to defining scientific questions
- Design of scientifically testable hypotheses
- Broad based and cross-disciplinary knowledge acquisition
- Detailed knowledge of specific research area

Example Questions: *What areas of research specific knowledge have you mastered? Which specific skills need to be acquired? On a scale of 1-5 (1= needs attention while 5= extremely competent), how would you rate yourself on these specific skills?*

### **Competency 2- Research Skill Development**

Postdoctoral scholars are expected to have the fundamental knowledge necessary to identify important gaps in their field to produce valuable new research findings or to report/teach these findings. Postdoctoral scholars are expected to be able to design sound research protocols, safely perform the techniques necessary to conduct and analyze this research, and navigate the grant application and scientific publishing processes

#### Delineation of Specific Skills

- Research techniques and laboratory safety
- Experimental design
- Data analysis and interpretation
- Effective search strategies and critical evaluation of the literature
- Grant application and scientific publishing processes

Example Questions: *What techniques do you need to acquire to move current research projects forward? On a scale of 1-5 (1= needs attention while 5= extremely competent), how would you rate yourself on the specific skills listed above?*

### Competency 3- Communication Skills

In any professional environment, the ability to communicate one's thoughts in a way that people readily understand is critical. Although postdoctoral scholars learn many communication skills throughout their educational lifespan, these skills take time to master. Communication is more than preparing and sending a message; it is making every effort to be sure that the message is heard and understood by the appropriate audience.

Postdoctoral scholars are expected to demonstrate interpersonal and other communication skills that enable them to communicate effectively with colleagues at all levels. They must also be prepared to communicate with students, media, and society at large. They need to develop writing, speaking, and listening skills.

#### Delineation of Specific Skills

- Writing
  - Scientific publications
  - Grants/applications
  - Career, including *curriculum vitae*, resume, cover letters, and teaching statements
  - Research and teaching statements or portfolio
  - Letters of recommendation or collaboration
- Speaking
  - Presenting research to scientific and lay audiences
  - Conference and seminar presentations, including posters and PowerPoint
  - Job interviews and job talks
- Teaching and Mentoring
  - Teaching methods
  - Learning styles
  - [Teaching resources](#)
- Interpersonal Communication Skills
  - Style, tone, and non-verbal cues
  - Negotiation, e.g., in difficult economic times, formal conversations with PIs/mentors about continued funding of the postdoc position
  - Performance reviews/feedback
  - Conflict resolution, including difficult conversations/minimizing conflict
- Special Situations
  - Networking
  - Managing the news media

Example Questions: *What writing experience do you presently have (e.g. publication record, fellowship/grant writing...)? What is your experience in oral presentations (including within group meetings, conferences, long (15-30 min), or short (0.5-5 min) formats)? What is the current level of teaching experience (settings, preparation, etc...)?*

## Competency 4- Professionalism

Postdoctoral scholars are expected to adhere to accepted professional standards and practices within their immediate workplace (e.g., laboratory, office), institution, and discipline. They are also expected to reflect and advance the values of their profession in the community at large.

One's professionalism is relevant in different contexts that govern and define the potential interactions the scholar engages with his/her environment. A proper discussion of professionalism should integrate concepts of:

- Workplace professionalism, connecting with the immediate working team
- Institutional professionalism, connecting with the research infrastructure
- Collegial professionalism, connecting with the discipline of expertise
- Universal professionalism, connecting with society in representing an expertise.

### Delineation of Specific Skills

- Assess and uphold workplace etiquette, performance standards, and project goals
- Comply with rules, regulations, and institutional norms
- Respect, evaluate, and enhance the intellectual contributions of others
- Advance and promote the discipline by participating in public and professional service activities, such as professional societies, editorial and advisory boards, peer review panels, and institutional committees.
- Advance and promote the discipline by participating in partnerships with government agencies, foundations, and/or nonprofit organizations, such as funding agency grant panels or other advocacy/advisory boards to contribute to the advancement and promotion of the discipline.
- Identify and manage apparent and actual conflicts of interest, ethical violations, and violations of expected professional behavior

Example Questions: *In addition to conducting research, how can you participate and contribute to your field? Who can serve as a mentor and example of professionalism in your field?*

## Competency 5- Leadership and Management

Postdoctoral scholars should have the skills and techniques needed to facilitate effective team work, manage day to day operations within their workplace, and pursue leadership opportunities at the local, institutional, regional, and national levels. These skills will also help the person to mentor others more successfully.

### Delineation of Specific Skills

- Personnel Management



- Recruiting, hiring, and terminating personnel
- Mentoring and retaining personnel
- Conducting performance reviews and providing feedback
- Working with individuals of diverse backgrounds
- Managing conflict/having difficult conversations
- Project Management
  - Establishing priorities
  - Short and long-term planning
  - Time management
  - Establishing/maintaining effective collaborations
  - Developing/managing budgets
  - Tracking use of and ordering supplies and equipment
  - Recordkeeping in print and electronic media; establishing data back up protocols
  - Running a meeting
  - Delegating responsibilities
- Leadership Skills
  - Identifying and clarifying goals
  - Motivating/inspiring others
    - Understanding the long-term strategic vision and helping others to see where their work/roles fit in this picture
    - Understanding how to use appropriate leadership styles in any given situation
  - Serving as a role model

*Example Questions: What experiences/opportunities do you have mentoring others in the context of research projects? Which UCI Graduate Professional Success (GPS) workshops would hone your skills?*

## **Competency 6- Responsible Conduct of Research**

Postdoctoral scholars are expected to make ethical and legal choices, develop appreciation for the range of accepted practices for conducting research, be familiar with the regulations, policies, statutes, and guidelines that govern the conduct of government-funded research, as appropriate, and be aware of the available tools and resources to which they can turn when ethical questions and concerns arise.

**Postdoctoral scholars would be expected to [1](#):**

- Improve their ability to make ethical and legal choices.
- Develop appreciation for the range of accepted practices for conducting research.
- Be familiar with the regulations, policies, statutes, and guidelines that govern the conduct of government-funded research, as appropriate.
- Be aware of the available tools and resources to which they can turn when ethical questions and concerns arise (see comment under "research misconduct" bullet).

## Delineation of Specific Skills

- Data ownership and sharing
  - Sharing of data with collaborators, including industry-specific concerns as appropriate
  - Ownership and access to data, particularly once a postdoc's appointment ends
  - Understanding and respect for intellectual property rights, patents, and copyrights
  - Understanding criteria for authorship and the elements of responsible publication
- Research with human subjects (where applicable)
  - Ethical principles for conducting human subjects research, including informed consent and subject confidentiality
  - Federal, state, and local regulations/guidelines for conducting human subjects research
  - Institutional Review Board (IRB) processes and procedures
  - Requirements for reporting clinical trials
- Research involving animals (where applicable)
  - Ethical principles for conducting research with animals
  - Federal, state, and local regulations/guidelines for use of animals in research
  - Understanding the Three Rs: Replace, reduce and refine animal use in research
  - Institutional Animal Care and Use Committee (IACUC) processes and procedures
- Identifying and mitigating research misconduct
  - Applicable definitions of misconduct (federal, ORI/PHS, NASA, NEH, NSF, etc.)
  - Reporting procedures
  - The role and risks of being a whistleblower.
- Conflicts of interest
  - Personal and intellectual conflicts
  - Conflicts of commitment
  - Financial conflicts
  - Confidentiality and bias in peer review
  - Conflicts and potential competition between mentor and trainee.

Example Questions: *What, if any, courses/training have you taken so far related to the Responsible Conduct of Research or Research Integrity? On a scale of 1-5 (1= needs attention while 5= extremely competent), how would you rate your knowledge of these topics and/or guidelines?*

## Professional Success Resources at UC Irvine

### Graduate Resource Center Workshops (for all postdoctoral scholars)

<http://www.grad.uci.edu/professional-success/workshops.html>

### Postdoctoral Scholars Association (for all postdoctoral scholars)

<http://pda.grad.uci.edu/professional-development-and-social-events-for-uci-postdocs/>

### UCI-GPS- Biomed (if in biomedical sciences)

<http://gps.bio.uci.edu/participants/participating-departments/>

### UCI International Center (if International Scholar)

<http://www.ic.uci.edu/>