

3-Tiered Taxonomy used by the Vanderbilt University Office of Biomedical Research Education and Training (VU BRET)

Tier 1: Sector	Answer options	Definition	Coding clarifications
	Academia	Any academic institution where education or research training occurs including colleges, universities, K-12 schools, and some medical centers with "university" in the name.	Includes healthcare clinics, hospitals, and medical centers that have the word "university" in the name of the organization. If "university" is not in the name of the healthcare provider or hospital, the record should be classified in a different sector (usually nonprofit). Except for K-12 schools, foreign universities, and newly established universities, all records that are categorized as "sector=academia" should have a Carnegie ID.
	Government	Organizations operated by federal, state, local or foreign governments.	Includes VA hospitals, national laboratories, and military laboratories
	For-Profit	Organizations or entities that operate to make a profit, including some industry research.	Includes self-employed individuals, unless they operate not-for-profit entities
	Nonprofit	Non-governmental organizations that do not operate to make a profit.	Includes many hospitals, healthcare centers, and independent research institutes (see Association of Independent Research Institutes for a list). If the organization has the word "university" in the name, code it as academia.
	Not employed	For individuals who are not currently employed or unemployed	Includes individuals who are full-time caretakers or parents
	Deceased/Retired	For individuals who are deceased or retired	
	Unknown	For individuals for whom no employment information is found or known.	

Tier 2: Career Type

Answer options	Definition	Coding clarifications
Primarily research	The primary, although not necessarily the only, focus is the conduct or oversight of scientific research.	Most faculty at US research-intensive institutions with very high research activity, or medical schools, as identified through Carnegie classifications 15 or 25, will be included here. Individuals whose primary role is to conduct research will usually oversee or be a member of a research team.
Primarily teaching	The primary, although not necessarily the only, focus is education and teaching.	Includes most academic faculty at all other Carnegie institutions that are not mentioned above.
Primarily administrative or managerial or operational	The primary, although not necessarily the only, focus is administrative functions, managing people or programs, or overseeing or executing operational functions.	Does NOT include individuals who oversee research activities. Healthcare providers, except medical residents or individuals in training, should be included here; residents, interns, and others in training should be classified in "further education or training."
Further education or training	Temporary education or training position <i>other than</i> research postdoctoral fellows.	Includes individuals who are completing medical residency, interns, and those pursuing an additional degree. Postdoctoral fellows who are conducting research should be classified as "primarily research." Other types of "fellows" (clinical, policy, data science, regulatory) should be classified here.
Not employed	For individuals who are not currently employed or unemployed	Includes full-time caretaker or parent or individuals on extended medical leave
Deceased/Retired	For individuals who are deceased or retired	
Unknown	For individuals for whom no employment information is found or known.	

Tier 3: Job Function

Answer options	Definition	Coding clarifications	Example duties/titles
Administration	Role that involves the administration of science, research, or education-related programs or products in academia or nonprofit sectors	Many academic and nonprofit administration jobs go here, including executive leadership. Individuals in administrative roles in government should be coded as job function="science policy or government affairs." Generally, individuals in administrative roles in for-profit companies should be coded elsewhere according to the division of the company in which they work.	Faculty affairs, graduate program administrators, human resources, academic admissions, career development offices, grant and contracts management, research development, PhD-level program development, project manager, dean, provost, chancellor, department chair, center director, assistant dean, associate dean
Business development, consulting, and strategic alliances	Role that involves the development, execution, management, or analysis of a business. Role may include relationship management, refinement of operational efficiency, or fee-based advisory services.	Includes subject matter experts, technical consultants, competitive intelligence, and third-party market analysis. Does not include chief scientific officer (CSO), which is classified as "Principal investigator or group leader" with an Executive flag. Does not include academic deans, who should be classified in Administration with Executive flag.	Management consultant, business development professional, market researcher, investment analyst, venture capitalist
Clinical research management or clinical development	Role that is responsible for the administrative management of clinical research trials or patients or data, planning or execution of clinical trials, or clinical development of compounds	These positions may involve coordination with regulatory and scientific groups. Some quality assurance (QA) roles may fit well here. Other QA roles may fit better under regulatory affairs or manufacturing, depending on the context.	Clinical research project manager, clinical research trials manager or coordinator, clinical data manager, clinical data analyst, director of clinical development
Clinical services	Role that involves the execution or interpretation of diagnostic or forensic tests or administration of clinical services, not including healthcare providers.	Does not include healthcare providers or clinical research/trials-related work.	Genetic counselor, testing specialist, clinical laboratory directors or staff, forensic scientist, neurophysiological monitoring

Tier 3: Job Function (cont)

Answer options	Definition	Coding clarifications	Example duties/titles
Completing further education	Pursuing additional education that results in graduation with conferment of a degree or certificate.	Only degree or certificate-granting programs should go here. Research postdoctoral fellowships should be classified as "Postdoctoral." Other types of training programs (internships, residencies, non-traditional postdocs in policy, regulatory affairs, data science, etc.) should be classified in the job function that best captures the type of work. For example, a resident should be classified as "healthcare provider" and a AAAS policy fellow should be classified as "science policy or government affairs."	Law student, medical student, veterinary student, nursing student, MBA student
Data science, analytics, and software engineering	Role that may combine programming, analytics, advanced statistics, data communication, and/or software development.	Accompanying career type (research OR administrative/operational) determined by type of work they do; data scientists should be classified as "career type=primarily research" and programmers and software engineers should be classified as "career type=primarily administrative, managerial, or operational."	Programmer, data scientist, software architect or engineer, genomic data analyst
Entrepreneurship (scientific or healthcare)	Founder or co-founder-of a company that develops, manages, and provides/obtains capital to initiate a business or enterprise based on a scientific, research, or healthcare discovery or product.	Does not include C-suite of well-established companies or C-suite employees who were not involved in establishing the original business; these individuals should be classified in other categories, likely as "business development." Does not include staff at start-ups, or individuals who are sole proprietors providing an administrative service (e.g. medical writers, consultants).	Founder, co-founder

Tier 3: Job Function (cont.)

Answer options	Definition	Coding clarifications	Example duties/titles
Healthcare provider	Role where the primary responsibility is providing healthcare		Doctor, nurse, medical resident, veterinarian, dentist
Intellectual property and law	Role that involves the curation, management, implementation or protection of intelligence and creation, including trademarks, copyrights, patents, or trade secrets.	Includes technology transfer specialists at universities, nonprofits, and government agencies. Includes employees of the US Patent and Trademark Office.	Patent agent, patent attorney, patent scientist, patent reviewer, technology transfer specialist.
Manufacturing and process development	Role that involves the oversight, design, or optimization of manufacturing processes	Some quality assurance roles may fit well here. Others may fit better under regulatory affairs or clinical development, depending on the context.	Process engineer, quality assurance engineer
Medical affairs	Role that involves providing scientific and clinical support for commercial products.	Does not include medical writers, who should be classified under "scientific or medical writing or communication"	Medical science liaison, medical affairs officer or manager, medical director, medical information officer
Postdoctoral	Temporary mentored research training position following completion of doctoral degree.	Use only for postdocs that appropriately coded as "career type" = Primarily Research.	
Principal investigator or group leader	Role in an academic, industry, government, or nonprofit setting where the primary responsibility is leading a basic, translational, or preclinical research team or program.	These individuals are responsible for funding and/or managing a research program or group(s). Role is directly responsible for determining the direction of research programs. Titles such as Principal Scientist and Director need to be evaluated on a case-by-case basis and, if similar to academic core facility directors, these titles should be classified as "research staff or technical director." Generally, does NOT include Scientist I/II/III or Senior Scientist titles.	Principal investigator (PI), tenured and tenure-track "professor" titles at universities, research institutes, VA hospitals, and other government research institutions, chief scientific officer (CSO), director of research & development, group leader, vice president of research.

Tier 3: Job Function (cont)

Answer options	Definition	Coding clarifications	Example duties/titles
Regulatory affairs	Role that involves controlling or evaluating the safety and efficacy of products in areas including pharmaceuticals, medicines, and devices	Any science/medical writing that is regulatory in nature should be classified here; Some quality assurance roles may fit well here. Others may fit better under manufacturing or clinical development, depending on the context.	Institutional regulatory affairs professional, quality control specialist, compliance officer, senior safety specialist
Research staff or technical director	Role that directly involves performing or managing research	This should be used unless the individual is clearly responsible for funding and managing an independent research group studying a specific scientific hypothesis. Nontenure track research faculty are included here. Most entry-level scientist roles in industry are included here.	Senior scientist, staff scientist, scientist I/II/III, lab/core managers, directors of research facilities, public health analyst, epidemiologists, research assistant professor, research instructor, research associate
Sales and marketing	Role that is related to the sales or marketing of a science-related product or service	This does not include medical science liaisons, who should be coded under medical affairs	technical sales representative, marketing specialist
Science education and outreach	Role that involves K-12 teaching or public outreach at primary/secondary schools, science museum, scientific society, or similar	Includes primary and secondary education teachers (K-12 teachers)	K-12 educator, high school teacher, museum curriculum development, outreach program administrator
Science policy and government affairs	Role that involves policy or program development, operations, or review, including analysis, advisory, or advocacy	All non-research positions in government are coded here.	Program officer, public affairs or government affairs staff at scientific societies, foundations, government entities, or think tanks; Science Policy Analyst, Public Health Analyst, AAAS Science & Technology Policy fellow

Tier 3: Job Function (cont.)

Answer options	Definition	Coding clarifications	Example duties/titles
Science or medical writing or communication	Role that involves the communication of science-related topics	Does not include regulatory writing, which should be classified under "regulatory affairs"	Science, medical, or technical writer, journalist, science editor, science publisher
Teaching faculty or staff	Post-secondary teaching position where teaching is majority of the individual's professional activity.	This may include faculty at teaching-intensive institutions who maintain research programs primarily for the purpose of educating undergraduates; the majority of the time/effort and the salary of individuals in this category typically comes from the institution and not research grants. K-12 teachers are NOT coded here; they should go under STEM education and outreach.	
Technical support and product development	Role that requires specialized technical knowledge of a science-related product		Technical support specialist, field application specialist, product development scientist or engineer
Other	Some other job function that is not defined elsewhere	These positions may be science-related or non-science related	Service sector jobs; ownership of non-science related companies
Not employed	For individuals who are not currently employed or unemployed		Full time homemaker, caretaker
Deceased/retired	For individuals who are deceased or retired		
Unknown	For individuals for whom no employment information is found or known.		