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ABSTRACT

This handbook was undertaken in response to the needs expressed by the higher education community for a common language--common data categories and definitions--to describe the human resources of postsecondary education institutions, and is intended as a basic guide to help institutions develop analytically useful databases of faculty and staff to support institutional decision making. Chapter 1 reviews the basic concepts underlying the selection of elements and that guide their use, including descriptions of the basic categories of data. Chapter 2 lists the faculty and staff data items recommended for an institutional database. Chapter 3 contains the data element dictionary--the definitions and detailed codes necessary for creating a standardized database. Chapter 4 offers examples, in two major categories, of some common uses of these data: to support strategic planning and management (employee characteristics/amount of human asset available/price and cost considerations/allocation of available asset/productivity/student experience/asset renewal) and for data exchange; and for reporting to external agencies (employee demographics/salaries/assets available for allocation to various institutional functions). Chapter 5 contains a glossary of related terms. Appended are detailed definitions of human asset categories and subcategories; a cross-reference of standard occupational categories to human asset categories; information on how to compile data, an illustration of basic calculations, and country and language codes. (BF)

NATIONAL CENTER FOR EDUCATION STATISTICS

Handbook on Human Resources: Recordkeeping and Analysis

U.S. Department of Education
Office of Educational Research and Improvement

NCES 98-302

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Handbook on Human Resources: Recordkeeping and Analysis

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Foreword

This handbook was undertaken in response to the needs expressed by the higher education community for a common language--common data categories and definitions--to describe the human resources of postsecondary education institutions. The work was initiated as a cooperative effort by a group of higher education professionals working through their professional associations (Association for Institutional Research, Society for College and University Planning, Association for the Study of Higher Education, and the American Educational Research Association, Division J). Under the leadership of Deborah Teeter of the University of Kansas, seed money for the project was obtained from TIAA-CREF. These funds supported the development of the conceptual design of the handbook and specifications of its content.

The handbook is intended as a basic guide that can assist postsecondary institutions in developing an analytically useful database on their faculty and staff. It reflects the perspectives and judgment of a broad-based group of professionals with expertise in postsecondary institutional analysis and a deep understanding of the issues concerning postsecondary education faculty and staff. It is not an all-inclusive data element dictionary. Rather, it defines and establishes common reporting categories for those data elements that are needed for internal institutional analysis, interinstitutional comparisons, and external reporting.

We hope that, as institutions establish a single, well-defined record-keeping system on their faculty and staff, their capacity to provide good information for effective institutional decisionmaking will grow; there will be greater comparability of staff data among postsecondary institutions; and there will be improved reporting to state and federal agencies.

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Chapter I Need for the Handbook and Basic Concepts

Viewed from almost any perspective, the educational enterprise places great value on its faculty and staff. The central functions of colleges and universities cannot be performed without them. Personnel expenditures typically account for at least 60 percent of an institution's education and general expenditures. In hard times, education institutions will accept reductions in supplies, equipment, and even class offerings before they will lay off employees. This handbook argues for explicit recognition of faculty and staff as key institutional "assets," and indicates the planning and management consequences of that designation.

Faculty and staff already are recognized implicitly as key institutional assets, not just institutional resources, and the urge to protect those assets is high. However, effective decisionmaking about these assets and their contributions to institutional priorities ultimately must be based on data that are not readily available in most colleges and universities. Personnel data typically are scattered throughout the institution, and each time information for strategic planning, management, or research is requested, it takes valuable time and energy to bring together the data. Those making requests rarely allow institutions enough time to present a coherent response, let alone the time to assess or change the way they maintain the personnel information on which the response was based.

Institutions need a standard way to arrange data describing their human assets, as well as knowledgeable advice regarding what data to maintain, how to relate it, how to analyze it, and how to report it. This handbook, a collaborative effort of the postsecondary education community, was developed to fill that need. It was extensively reviewed by its constituents at all levels with an eye toward helping institutional researchers, faculty and staff, and administrators confront policy questions about the appropriate mix of human assets, the cost of acquiring and maintaining these assets, and the allocation of these assets to various institutional functions and activities.

The technical advisory group's goals for the handbook are to:

- Identify an exemplary set of data elements for inclusion in an institutional database, backed up with definitions and documentation;
- Simplify and standardize communication of key concepts concerning faculty and staff in postsecondary institutions;
- Provide guidance in the use of these data to inform institutional decisionmaking;
- Ease interinstitutional exchange of data on human assets by supporting the widespread adoption of this set of elements;
- Improve data collection and reporting to the federal government by creating a common language for data requests, thus increasing the comparability of the responses; and

- Provide a living common language that can be changed as knowledge of data and human assets grows.

The development of this handbook has been shaped by several guiding principles. First, the primary beneficiaries should be institutional users. While there are parts of the document that indicate data to be collected by state and/or federal agencies, the bulk of the document and illustration of data use focus on data exchange and comparisons among institutions and intrainstitutional issues. Second, adoption of the material in this handbook is voluntary. It is hoped that it will be so useful that many institutions will develop analytic databases using the handbook as a guide. There is no requirement that any institution do so. Those institutions that do utilize the handbook for guidance are encouraged to carefully select the items to be included in their local databases. Not every element is appropriate to, or needed by, each institution. In addition, institutions may wish to add elements needed at the local level, but not included in this recommended set.

Chapter I contains some of the basic concepts that underlie the selection of elements and that guide their use, including a description of the basic categories of data. Chapter II lists the faculty and staff data items recommended for an institutional database. Chapter III contains the data element dictionary, the definitions, and detailed codes necessary for creating a standardized database. Chapter IV suggests how to use the data elements to generate information for internal use, for exchange with other institutions, and for reporting to state and federal agencies. Chapter V contains a glossary of related terms.

Basic Concepts

Faculty and Staff as Institutional Assets

This handbook introduces the idea of looking at faculty and staff as key institutional assets, not merely as institutional resources. Although subtle, the distinction is critical. Resources often can be neglected or taken for granted; in most cases they are renewable and relatively easy to replace. Assets, on the other hand, by their very nature warrant planned management, conservation, and careful uses. Viewing employees as assets shifts the decisionmaking context from "purchase of services" to "investment in capacity," a fundamentally different way of looking at personnel. This different perspective alters the kind of data needed.

In considering faculty and staff as institutional assets, managers must focus on how to create and maintain the asset and how to manage and use the asset in a cost-effective way. Specifically, an ongoing need arises for data about:

- The quality and composition of the asset. This is nothing new, particularly with respect to gender, ethnicity, and academic credentials. Increasingly, however, institutions are faced with the trade-off between acquiring and utilizing an institutional

asset and accomplishing the task through purchased or contracted services. The central question becomes whether hiring and retention decisions taken together have resulted in building institutional assets that are consistent with the needs of the institution and best serve its clients.

- The investment made initially to create the asset, that is, the commitment to and expense of attracting new faculty and staff.
- The ongoing need for personnel development. While the term "asset depreciation" will not serve here, the concept does draw attention to the proposition that any institutional asset over time becomes less useful unless it is periodically renewed. In other words, it raises concern for staff development, sabbaticals, and faculty involvement in scholarly activities. Although those are currently recognized as needed, under the assets concept they become necessary ingredients to ensure and protect the institution's key asset.
- The allocation and use of the asset. Institutional managers must not only create and sustain a strong cadre of faculty and staff, they must ensure that they are engaged in activities that promote the cost-effective performance of core functions. Thus, for managerial purposes, the allocation and utilization of the human asset must be described in a meaningful way.

Some Central Conventions

The data categories and definitions for elements such as gender, race/ethnicity, and age, for example, are straightforward and need no explanation. There are several items, however, for which some detailed discussion is appropriate and necessary. Those items for which some general conventions must be established include:

- The domain–who is to be included or excluded;
- The standardized categories of human assets;
- Treatment of student employees;
- The amount of each of these categories of human assets available for assignment;
- The functions to which personnel can be assigned;
- The procedures for assigning human assets to institutional functions; and
- The price (and cost) of the asset.

Each of these areas is discussed in some detail in the balance of this chapter.

The Domain. Many of the functions necessary for the successful operation of a college or university can be performed in alternative ways. Given resource limitations, it is likely that we will see increasing innovation and diversity in how postsecondary institutions conduct their affairs. An obvious example is that institutions now contract for many services previously provided by employees–custodial services, printing, central stores, security services, the operation of bookstores and dining facilities, and so forth. Also, it is becoming common for employee functions to change. For example, academic

advising now is often conducted by professional advisors rather than members of the instructional staff. Similarly, undergraduate students commonly perform tasks previously assigned to graduate students. It is no longer just a question of hiring the right faculty and using them well. It is, rather, a question of having the appropriate cadre of employees to perform all the functions required for the effective operation of the institution.

Therefore, the suggested database encompasses all individuals considered employees of the institution, including members of religious orders and others who contribute their services as well as student employees, whether paid hourly, through work study, or by graduate teaching or research assistantships. Excluded from the proposed database is detailed information on employees of other organizations, such as consultants or employees of firms under contract to provide food services. However, the total amount of the human resource represented by contracted staff by standard personnel categories is necessary for meaningful interinstitutional comparisons and external reporting. Not all the types of data described in this handbook will be kept on all employees, nor should all institutions maintain all categories of data. Some types of data are important to research universities but of little consequence to community colleges or four-year teaching institutions. However, as a fundamental requirement of human asset management, it is recommended that data be maintained on:

- The amount of human resource (e.g., full-time equivalent–FTE) represented by all employees of the institution;
- The assignment to or use of those resources by the various organizational units or functional areas of the institution.

Standardized Categories of Human Assets. The operation of an institution of postsecondary education requires widely differing kinds of activities. Students must be taught and research objectives pursued; at the same time, students must be registered, revenues collected and bills paid, and the floors cleaned.

Most institutions recognize this array of specialization through elaborate and complex position-classification schemes, which may serve intrainstitutional purposes well but make poor vehicles for data reporting and exchange. Common terms such as "faculty" may take on entirely different meanings from one institutional setting to another. (See appendix A.) That is why a standard typology of personnel for interinstitutional use is needed, a typology into which existing institutional classification schemes can be translated for exchange or comparison of data with other institutions or for reporting of data to external agencies.

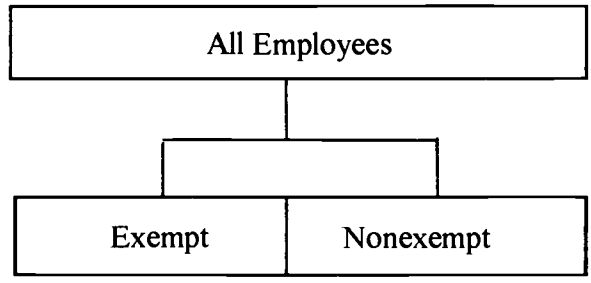
This handbook generally analyzes previously developed staff categories used by the Equal Employment Opportunity Commission (EEOC) and the National Center for Education Statistics (NCES) in collecting data from postsecondary institutions. The categories have been refined slightly to overcome identified shortcomings.

While the handbook borrows from previous work, it might be useful to present the rationale on which the classification system is based. The criteria employed in creating the categories were that the schema:

- Comprise the minimum number of categories needed to identify distinct kinds of institutional personnel;
- Accommodate required legal distinctions; and
- Reflect common institutional practice to the extent possible.

As a point of departure, the federal government's legal distinction between "exempt" and "nonexempt" employees is retained. To comply with the Fair Labor Standards Act (FLSA), institutions must assign their employees to either "exempt" or "nonexempt" categories on the basis of criteria included in the legislation. [Section 13 of the Fair Labor Standards Act of 1938, as amended, indicates that an exempt employee is "any employee employed in a bona fide executive, administrative, or professional capacity . . . ."] This distinction typically is incorporated into institutions' record systems and personnel classification schemes. Thus, at a minimum, any human asset classification scheme must reflect the distinction between exempt and nonexempt employees as seen in figure 1.

Figure 1
Employee Categories According to FLSA

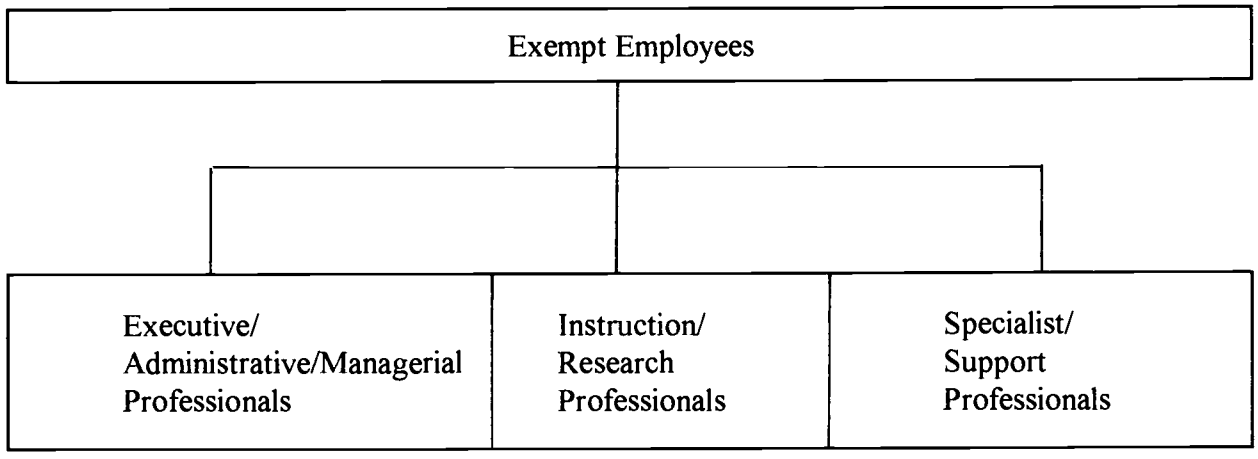


For management purposes, more detail is required within each of those categories. The distinction between exempt and nonexempt employees does not identify different groups of individuals having more or less similar capabilities. The exempt category, for example, includes employees available to perform instructional and research activities (in conventional terms, the faculty) as well as those responsible for executive direction and administrative support. At least two subcategories within the exempt category, then, are necessary–subcategories that might be labeled as (1) instruction/research professionals and (2) executive/administrative/support professionals. While institutions differ regarding the categorization of certain groups of individuals (such as department chairs), the basic distinction between instruction/research employees and all other exempt employees is made almost universally. For many purposes it may be desirable to further divide the

"administrative" category, which includes such diverse positions as vice presidents, administrative department heads, accountants, purchasing agents, and librarians.

This handbook suggests a distinction within this larger category based on the supervisory responsibilities of the individuals–a subcategory entitled executive/ administrative/managerial professionals, for exempt employees who supervise a department or other organizational unit and another, labeled specialist/support professionals, for those without supervisory responsibilities. Those with supervisory responsibilities typically are responsible for making work assignments and planning, organizing, directing, and controlling the activities of a department or other administrative unit within the institution. The categorization scheme for exempt personnel presented here can, therefore, be illustrated as in figure 2.

Figure 2
Exempt Employee Subcategories



There is a similar need for more detail within the nonexempt category of personnel. Nonexempt employees perform diverse activities and institutional practice varies greatly in categorization of these employees, making the identification of appropriate subcategories difficult. It is possible, however, to borrow a great deal from private business practice and nomenclature. Identified by the predominant type of activities performed, the suggested subcategories of (1) technical, (2) office/clerical, (3) crafts and trades, and (4) service employees span the range of nonexempt personnel assets. The categorization scheme for nonexempt employees presented in this handbook therefore can be described as in figure 3.

The complete scheme for categorizing human assets presented in this document is shown in figure 4.

Figure 3
Nonexempt Employee Subcategories

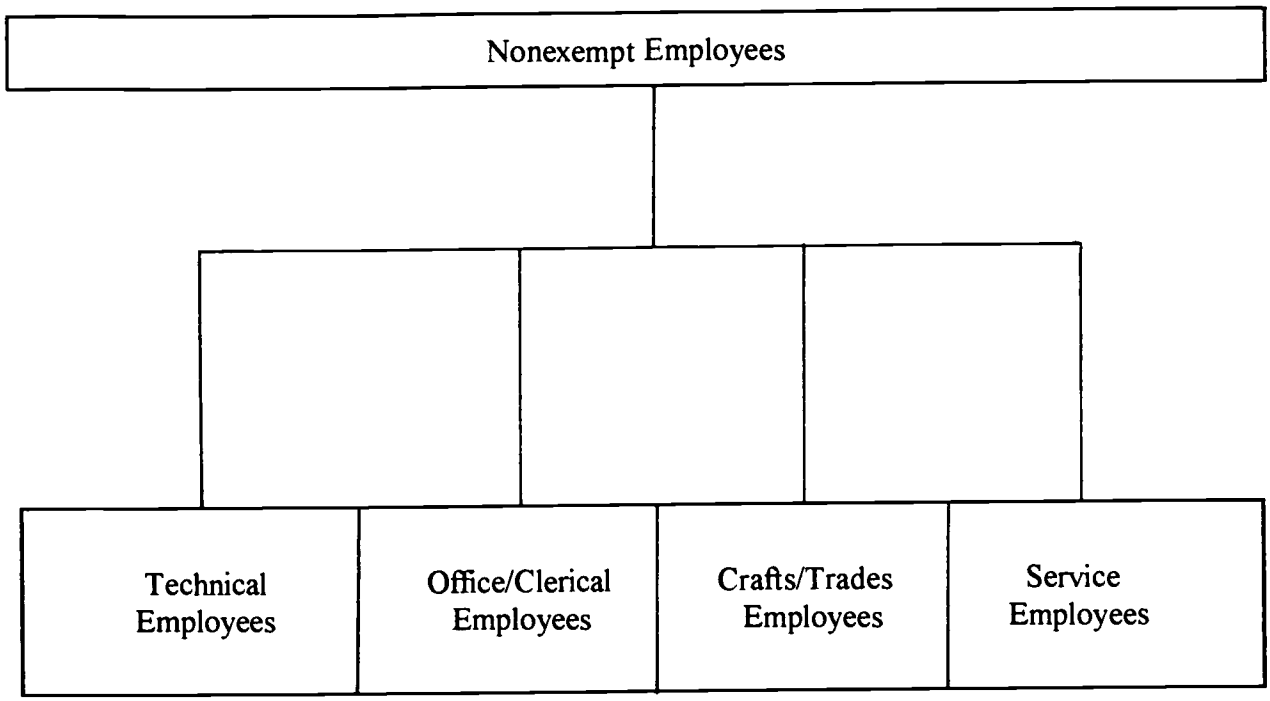
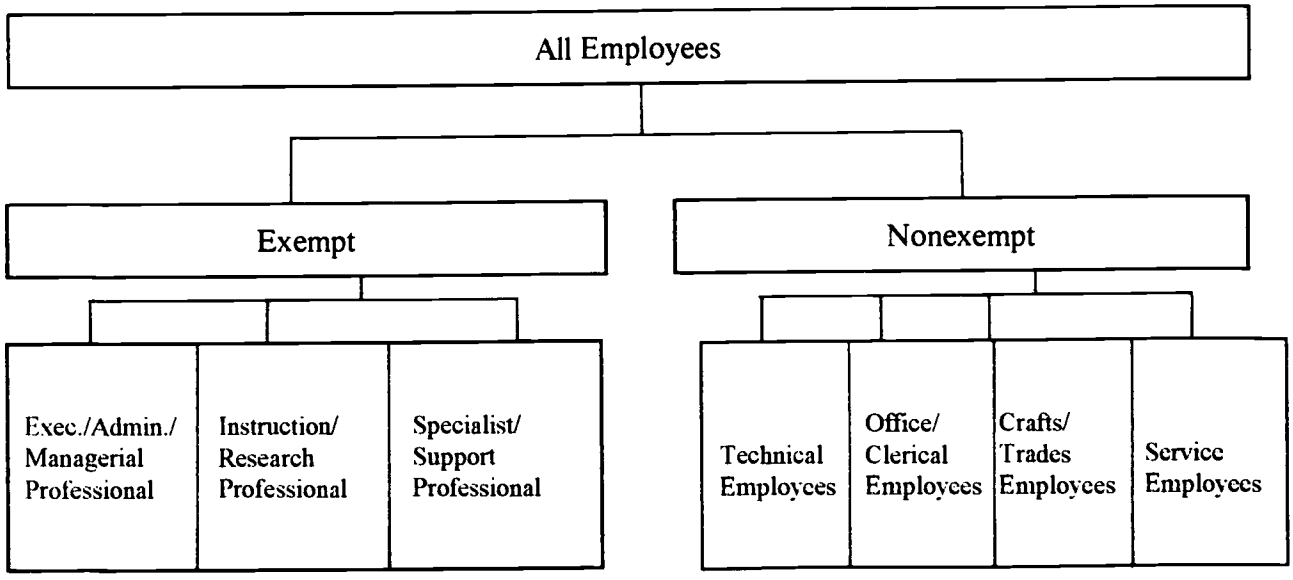


Figure 4
All Employee Categories and Subcategories



Each of the terms in this categorization is defined according to existing NCES and EEOC terminology. An attempt is made to indicate a "conventional" categorization for certain groups of employees for which more than one category might appear appropriate.

Employee: Any individual being compensated by the institution for services rendered. Specifically excluded are employees of firms providing services to the institution on a contract basis. One practical way of categorizing employees as distinct from contract personnel is to recognize as an employee all individuals for whom the institution files a W-2 form with the Internal Revenue Service.

Exempt Employee: An employee whose conditions of employment and compensation are not subject to the provision of the Fair Labor Standards Act, as amended. Exempt employees are not eligible for overtime payment. According to Section 13 of the act, an exempt employee is "any employee employed in a bona fide executive, administrative, or professional capacity..."

Nonexempt Employee: An employee whose conditions of employment and compensation are subject to the provisions of the Fair Labor Standards Act of 1938, as amended. Nonexempt employees must be provided additional compensation (given overtime pay) when the number of hours worked exceeds the limits established in the Act.

Volunteers: Individuals who donate their services, if the services performed are a normal part of the institution's programs or supporting services and would otherwise be performed by employees. Excluded are volunteers who may contribute significantly to campus life, but who would not be replaced by compensated staff if the services being provided were withdrawn.

Executive/Administrative/Managerial Professionals: Exempt employees employed for the primary purposes of managing the institution or a customarily recognized department or subdivision thereof. By convention this category includes deans but most commonly, although not always, will exclude chairs of academic departments (who usually are classified as instruction/research professionals). Inclusion in this category requires the individual to have supervisory responsibilities.

Instruction/Research Professionals: Individuals employed for the primary purposes of performing instruction, research, and community or public service activities. Typically includes only exempt employees (although in some institutions, primarily proprietary, they may be nonexempt). In most institutions of postsecondary education, these employees are the "faculty." The terms "faculty" and "academic" can be used to describe very different groups of employees. At some institutions the terms "faculty" or "academic staff" include only those who engage in classroom teaching; in others they commonly include those who perform research and service, as well as instructional activities. In still others, those terms

also include certain exempt administrative staff, and some institutions, for reasons such as the desire to extend fringe benefits to particular groups, may include librarians, computer center staff, and others. In this handbook, instruction/research professionals include the exempt research staff and those exempt employees devoted primarily to public service. At some institutions, it is appropriate to include department chairs in this group, since their classification and assignments are still primarily instruction, research, or service. However, there are some institutions where the department chair is actually an administrator who has been delegated specific administrative responsibilities and authority. Where such a situation exists, the department chair is more appropriately classified as an executive/administrative/ managerial professional. Some large departments employ executive officers to perform the day-to-day administrative tasks of the department. Such individuals should be classified as specialist/support professionals.

By convention, graduate teaching and research assistants or associates are included in this category (and distinguished from regular instruction/research professionals through use of a subcategorization scheme described later in this chapter). Individuals with the title "institutional researcher" should be classified as specialist/support professionals unless they manage a department of institutional research, in which case they would be classified as executive/administrative/managerial professionals. Those individuals who provide academic support services–tutoring, counseling, advising–as essentially a full-time job should be classified as specialist/support professionals.

Specialist/Support Professionals: Exempt employees employed for the primary purposes of performing (typically) academic support, student service, and institutional support activities. This category excludes individuals who have executive or managerial (supervisory) responsibilities in these areas. This category includes such employees as librarians, accountants, systems analysts and computer programmers, student personnel workers, counselors, tutors, advisors, recruiters, purchasing agents, staff architects and engineers, institutional researchers, and so forth.

Technical Employees: Individuals employed for the primary purpose of performing technical activities (that is, activities pertaining to the mechanical or industrial arts or the applied sciences). This category includes electrical and mechanical technicians, radiologic and other medical field technicians, and so on. This category includes only nonexempt employees.

Office/Clerical Employees: Individuals employed for the primary purpose of performing clerical activities. As defined in the *Standard Occupational Classification Manual*, clerical employees "prepare, transcribe, transfer, systematize, and preserve written communications, collect accounts, gather and distribute information, operate office machines and electronic data processing equipment . . . operate telephone switchboards, distribute mail," and so forth. This category includes only nonexempt employees.

Crafts/Trades Employees: Individuals employed for the primary purpose of performing (manually) skilled activities in a craft or trade. This category includes such employees as carpenters, plumbers, electricians, and so forth. It includes only nonexempt employees.

Service Employees: Individuals employed for the primary purpose of performing service (often noncertified or noncredentialized) activities. The category includes such employees as custodians, groundskeepers, security guards, food service workers, and so forth. It includes only nonexempt employees.

All of the categories in the handbook's classification scheme are expressed in terms of the kinds of activities individuals are employed primarily to perform. The fact that the president of an institution may be expected to teach a class does not alter the fact that he or she is employed primarily to perform executive and administrative activities, and is so classified. Similarly, an instruction/research professional may perform administrative or student service activities, but that should not obscure the fact that the individual is employed primarily to teach and do research. In short, this classification scheme is intended to sort employees by the primary assignments the institution gives them, not by their secondary responsibilities. Consideration of what individuals actually do and how their capabilities actually are used requires the additional dimensions described in later chapters.

For some purposes, a classification scheme comprising seven categories of human assets is sufficient; for other purposes, additional detail will be required. Major subcategories within each of the seven categories identified above have been developed, as follows:

1.0 Executive/Administrative/Managerial Professionals
  - 1.1 Executive officers (president, vice presidents)
  - 1.2 Deans and directors
  - 1.3 Unit heads, associate deans
  - 1.4 First-line supervisors

2.0 Instruction/Research Professionals
  - 2.1 Senior instruction/research (e.g., full and associate professor)
  - 2.2 Junior instruction/research (e.g., assistant professor and instructor)
  - 2.3 Teaching or research associate/assistant/fellow
  - 2.4 Non-ranked instruction/research personnel

3.0 Specialist/Support Professionals

4.0 Technical Employees

5.0 Office/Clerical Employees

6.0 Crafts/Trades Employees
  - 6.1 Advanced level (master)
  - 6.2 Intermediate level (journeyman)
  - 6.3 Entry level (apprentice)

7.0 Service Employees

A description of these subcategories and an extended discussion of the considerations and criteria for the actual classification of employees into the major categories are contained in appendix A. Also, a crosswalk between Standard Occupational Classification (SOC) titles and the human asset categories is presented in appendix B.

It is true that quite different kinds of activities may require generally similar levels and types of knowledge and skill for their effective performance. Thus, an individual may be able to serve in two functions that might otherwise be considered discrete, such as when an individual performs both instruction and administrative activities. This situation is one in which a single general class of employee performs multiple functions, but as a convention, an employee should be assigned to one and only one of the specified human asset categories.

Treatment of Student Employees. Students provide colleges and universities a wealth of talent and many of them are employed by the institution at some point during their college careers, benefiting both the student and the institution. Students can gain useful experience as well as earn some badly needed income. Institutions expand their employee base on very favorable terms–they gain skilled employees on a part-time, short-term basis with far fewer of the legal and bureaucratic entanglements than arise with regular employees.

Since student employees are a significant, and likely growing, component of the workforce on many campuses, it is important that their role in carrying out the necessary work of the institution be explicitly recognized. Because they come to the institution primarily as clients rather than employees, however, the expectations and basic relationships established for student employees is somewhat different from those for regular employees. Thus, there is reason to clearly distinguish student employees from other employees; data for student employees and other employees should be combined only when the need to do so is explicit. Creating an eighth human asset category does not make sense, because students legitimately could fall into any one of the seven categories. This handbook recommends flagging student employees separately in the database to maintain the ability to tabulate basic information about them, including human asset category, amount of asset represented by student employees, and allocation to function.

For purposes of this handbook, student employees are individuals who primarily relate to the institution as students (clients) and whose employment relationship to the institution is incidental. No full-time employee of the institution should be categorized as a student employee, but graduate assistants, work study employees, and students hired part-time to perform specific functions are. Individuals who primarily are employees but who happen to be taking a course or two should not be considered student employees.

Calculating the Amount of the Asset Available. A simple count of the number of individuals in each category will give a rough estimate of the amount of each kind of

personnel resource available to an institution. In the final analysis, however, the amount of human asset available is not the number of individuals but the amount of time they are available over a given period. In fact, headcounts are particularly misleading given the increasing use of part-time employees in all categories, but especially among instruction/research professionals. The prevalence of both part-time appointments (one-half or one-quarter time) and full-time appointments for less than a full year (one semester, for example) creates a situation in which "counting heads" yields a potentially exaggerated picture of the human assets available. Data must reflect these varying terms and conditions of appointment.

The least detailed (and probably the most common) method for ascertaining the amount of human assets available under those conditions is to identify individuals as either full-time or part-time employees and then calculate the full-time equivalence (FTE) of the part-time employees. Figure 5 summarizes this calculation.

To complete this table, it is first necessary to enter data on the headcount number of full-time, part-time, and student employees in each human asset category (columns 1, 2, and 4). Distinctions between full-time and part-time employees are reasonably easy to make for most categories; most employees are considered full-time if they work 35-40 hours per week for the full year. Identifying which of the instruction/research professionals are full-time is more difficult, because faculty members with eight- or nine-month contracts often are considered full-time employees. To be consistent, "full-time" for instruction/research professionals should be converted to a 12-month basis also. Because of resistance to this particular method of calculating the amount of human asset available that will likely arise within many institutions, it will be necessary to use the academic year as the planning and accounting base for internal purposes. However, when developing data for external reporting or exchange, the 12-month basis is more appropriate.

How full-time equivalence of the part-time employees is calculated is heavily influenced by the institution's employment practices. If, for example, all part-time employees in a particular category are considered half-time employees, the conversion to full-time equivalence is relatively straightforward. But if arrangements for part-time employees vary, the conversion must be almost individual-by-individual or based on an average derived from historical data (for example, one part-time employee=.33 FTE).

Use of full-time equivalent employees to measure the human assets available thus has limitations. First, for the instruction/research professional category, the definition of "full-time" varies. Second, the amount of asset represented by part-time employees varies, potentially misrepresenting the situation badly if averages are used to convert to full-time equivalents. A way to overcome these limitations is to shift to the concept of "service

Figure 5
Calculation of Amount of Asset, FTE, and Headcount for Employees

	Full-time	Part-time		Student		
Human Asset Category	Headcount (1)	Headcount (2)	FTE (3)	Headcount (4)	FTE (5)	Total FTE Employees (1)+(3)+(5)
Exec/Admin/Mgr						
Inst/Research						
Specialist/Support						
Technical						
Office/Clerical						
Crafts/Trades						
Service						

months" to measure workforce assets. A "service month" is equivalent to one individual working full-time for the period of one month. Service months are calculated by multiplying the percent of time worked (relative full-timeness) by the number of months of the individual's appointment. As examples, an individual employed half-time for 6 months would be the equivalent of (.5 x 6) = 3 service months of workforce assets. Someone employed full-time for nine months would be the equivalent of (1.0 x 9) = 9 service months of assets. Figure 6 summarizes workforce resource information using this concept.

To enter data in this format, one must identify those in each category who are full-time, those who are part-time, and those who are student employees. Strictly speaking, one need not distinguish between full-time and part-time employees to make this particular calculation, but for many management purposes it is extremely useful to separate them. Explicit recognition of student employees is almost always appropriate. This method gives institutions the latitude to define "full-time" for their own purposes while still achieving a measure of workforce assets (service months) that can be compared from institution to institution.

Figure 6
Calculation of Amount of Asset, Headcount, and Service Month for Employees

	Full-time		Part-time		Student		
Human Asset Category	Headcount	Service Months	Headcount	Service Months	Headcount	Service Months	Total Service Months
Exec/Admin/Mgr							
Inst/Research							
Specialist/Support							
Technical							
Office/Clerical							
Crafts/Trades							
Service							

Full-time employees are those available for full-time (100 percent) assignment, at least for the period being reviewed or analyzed. Part-time employees are those employed full-time for shorter periods of time as well as those not available for 100 percent assignment even though employed for the full period. Student employees are defined in the previous section of this chapter.

For most human asset categories, the calculation of service months is straightforward. Simply count those full-time employees in a particular category (for example, service) or subcategory within that category (for example, custodians), and multiply by the number of months per year full-time employees in that category typically work. In some categories (particularly instruction/research professional) employment arrangements may vary widely from individual to individual, making the service month calculation necessarily time-consuming. Nevertheless, failure to achieve an accurate measurement of the human asset represented by those individuals will almost certainly hamper the institution's planning and management. At very large institutions, however, calculating service months on an individual basis could be extraordinarily time-consuming, outweighing the benefits. In that case, service months may be calculated analytically using a formula based on data obtained on a sample basis.

Several points must be made here. First, each individual should be assigned to one and only one primary human asset category. Second, normal time off (holidays, vacations, sick leave) should be treated as work time. For example, a full-time, 12-month employee who has 10 holidays and took a 2-week vacation put in 12, not 11, service months. Third, the measure applies to the periods in which individuals actually worked, not the periods in which they received paychecks. A full-time, 9-month employee who receives 12 monthly paychecks represents 9, not 12, service months of asset. Finally, time an employee spends on paid leave for purposes of professional development (e.g., on sabbatical) should be included in the calculation. Medical leave (as opposed to sick leave) should not be included. The criterion to use is whether or not the leave time can be straightforwardly allocated to one of the functions described in the following section.

Using 12 service months as the equivalent of a full-time employee even for instruction/research professionals allows such data to be used in conjunction with financial data, which are developed almost exclusively on a 12-month (fiscal year) basis.

The Functions to Which Personnel Can Be Assigned. Institutional planners and managers need to show how human assets are allocated. At a minimum such a mechanism should track assignments across organizational units, to pick up instruction/research professionals with assignments in two or more academic departments, or those who have a part-time administrative assignment in addition to teaching. Tracking assignments by organizational unit is not enough, however. Analysts also must be able to distinguish the amount of effort devoted to each distinct function, for example, instruction, research, and public service within an academic department.

For interinstitutional exchange and reporting, a common set of functions to describe the allocation of human assets is even more crucial. Organizational units are institutionally unique, and consequently labels that are similar may mask fundamental differences in function. Describing by function in addition to organizational unit solves that problem. However, designation of an organizational unit is important for intrainstitutional analysis.

The most commonly used set of functional categories is found in NCHEMS *Program Classification Structure*, as modified by NCES for use in collecting and reporting data about institutional expenditures. This handbook adopts that schema with one significant modification: a professional development category is added, a necessity if the treatment of faculty and staff as assets is taken seriously. The functional categories of this schema are as follows:

- Instruction
- Research
- Public Service
- Academic Support
- Student Services
- Institutional Support
- Operation and Maintenance of Plant
- Auxiliary Enterprises
- Hospitals
- Professional Development

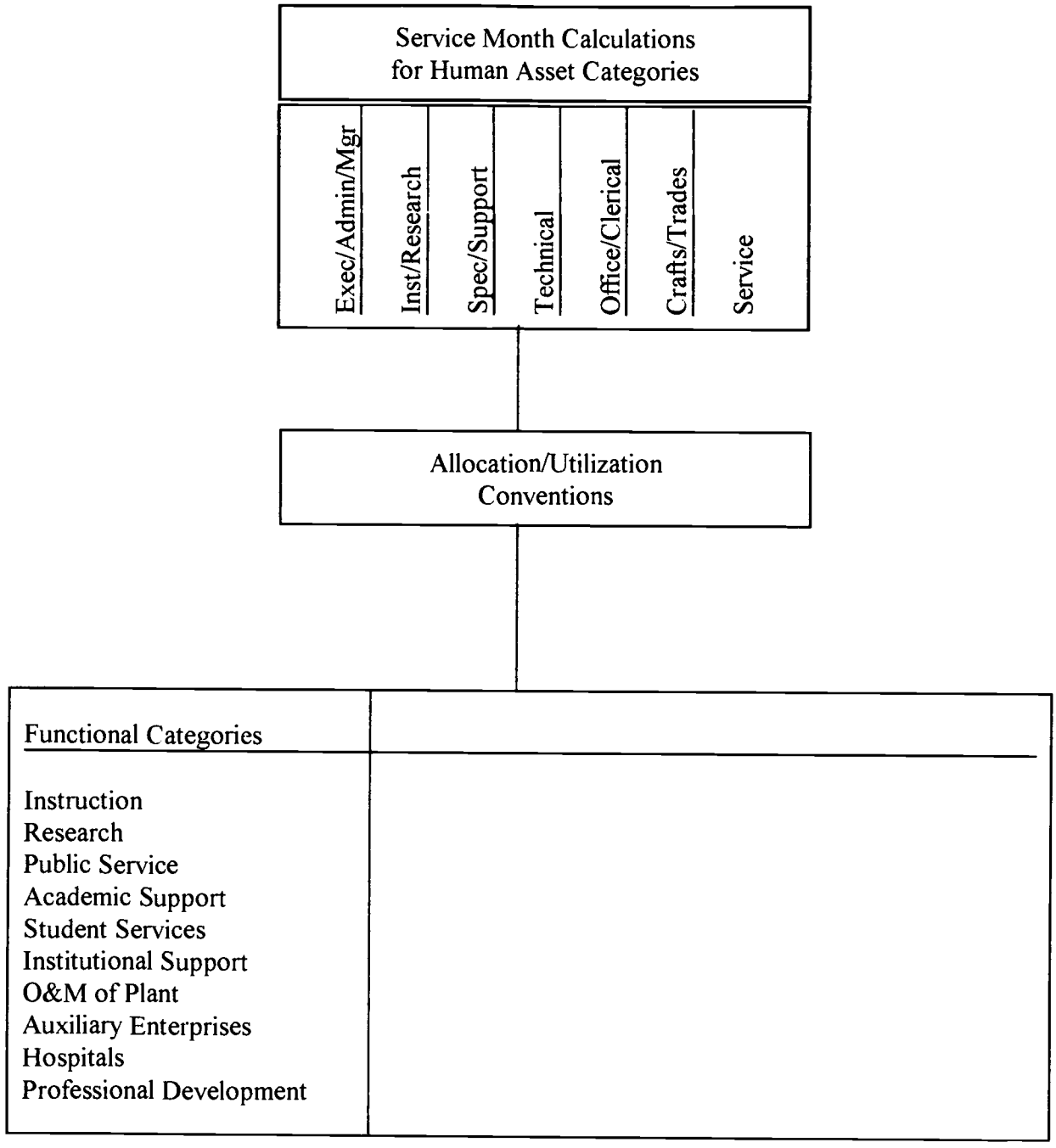
Definitions of these categories are presented in chapter III of this document.

Procedures for Allocating Human Resources to Institutional Functions. The desired result is to be able to take individual data and use it to calculate variables that can be displayed in a format similar to figure 7.

There are several things one must determine when using formats such as this. First is time perspective. This format can be used both to describe allocation of the available human assets and to record their actual use. Thus the data can reflect the resources projected to be available and how those resources are anticipated to be used, as well as the resources actually available over a period of time and how in fact they were used. One perspective represents the plan or intention, the other the actual distribution of resources. Actual use is necessary for federal reporting. If planned use is important for institutional decisionmaking, it should be included as a distinguishable item in the database.

Second is how to determine which values to enter in such a table. While institutional records typically contain the data required to calculate for each category the human assets available or actually used, information about distribution of those resources to functions almost always must be specially prepared and the data specially acquired. Typically this is

Figure 7
Data About Individuals



accomplished either by asking the department head to describe how the available human asset will be (or was) used, or by asking individual employees to report how they plan to or actually spent their time.

Third is unit of analysis. For intrainstitutional use, displays at the departmental level are appropriate. For interinstitutional exchange, however, institution is the appropriate unit of analysis. If more detail is desired for interinstitutional uses, extreme care must be taken to ensure that the smaller units of analysis are roughly comparable.

More information on this topic is presented in appendix C. An illustration of steps involved in calculating service months and allocating these to functional categories is presented in appendix D.

The price (and cost) of the asset. Up to this point, the human asset has been described in nonmonetary units–headcounts, FTE, or service months. Many managerial decisions, however, revolve around the financial measures that attach to the asset. It is useful to note the following:

- Price is often an important consideration. For example, to ensure that salary scales are competitive, data on basic wage and salary rates is needed. These are typically expressed in dollars per hour for nonexempt employees, and in dollars per appointment or contract year for exempt employees. In expressing base rates, specify both amount and the unit of time (1 hour, 9- or 12-months) to which the amount refers.

- New employees have an "acquisition cost." Not that a cost analysis of the search process is necessary, but it may be useful to estimate the costs associated with bringing the individual to campus (e.g., moving expenses, equipment and graduate student support, costs of adjuncts hired to reduce loads, renovations) and to include them in the individual's data record. This act reveals the (often large) magnitude of what has been a hidden cost at most institutions and could aid enormously in making decisions about future investments.

- In addition to price, there are questions of cost–how much individuals actually are paid over the year. Detailed cost information is best kept in a financial record system, rather than a human asset system. It is important to track both total salary and total compensation.

- If faculty and staff are considered an asset, ongoing development (analogous to facilities renewal and renovation) is necessarily a management concern. One way to measure its cost is to compare service months devoted to professional development to total service months, by category. Another is to compare the costs of professional development programs and activities to the total compensation expenditure for the institution. The first of these can be calculated from the human asset file; the second is better calculated from financial records.

Chapter II Data Structure

This section outlines the data elements suggested for inclusion in an analytic database for human assets. The elements are organized in groupings appropriate to the construction of a longitudinal database containing data about an institution's employees. Detailed definitions of these terms are presented in chapter III of this document.

The material was organized this way to put the individual items in context, indicate which elements should be captured at a point in time, and create a format consistent with the requirements of future use. This approach also makes it clear that institutions must gather some personnel data on a regular basis (e.g., term, year) and make it available for longitudinal analysis if the data are to serve the expressed needs that inspired this handbook.

Many of the ideas in this handbook draw heavily on prior research on longitudinal databases. For a more detailed discussion of their construction and use as applied to student data, the reader can consult *Establishing a Longitudinal Student Tracking System: An Implementation Handbook* by Ewell, Parker, and Jones (NCHEMS 1988).

Construction of a longitudinal database assumes that a good portion of the necessary data already exists somewhere in the institution's regular data files. Usually, however, data about the human asset are not in the form necessary to get a timely response to management questions.

A longitudinal database typically contains several different types of data elements. First there is a set of fixed data elements, drawn largely from standard personnel records, which are collected once at hiring. Second there is a set of semi-fixed variables, variables that change only rarely (highest degree earned, for example). Finally there is a set of variable data elements recorded for each reporting period that the individual is employed.

A tracking system file layout might look like that illustrated in figure 8. As the figure indicates, data are added for each reporting period. In addition, there are derived data elements that are calculated from one or more of the other types. This type of layout allows the user to perform analytical functions both at a point in time (cross-sectionally) and over a period of time (longitudinally).

Figure 9 displays the four categories of data recommended for this database, and examples of each.

Figure 8
Tracking System File Layout

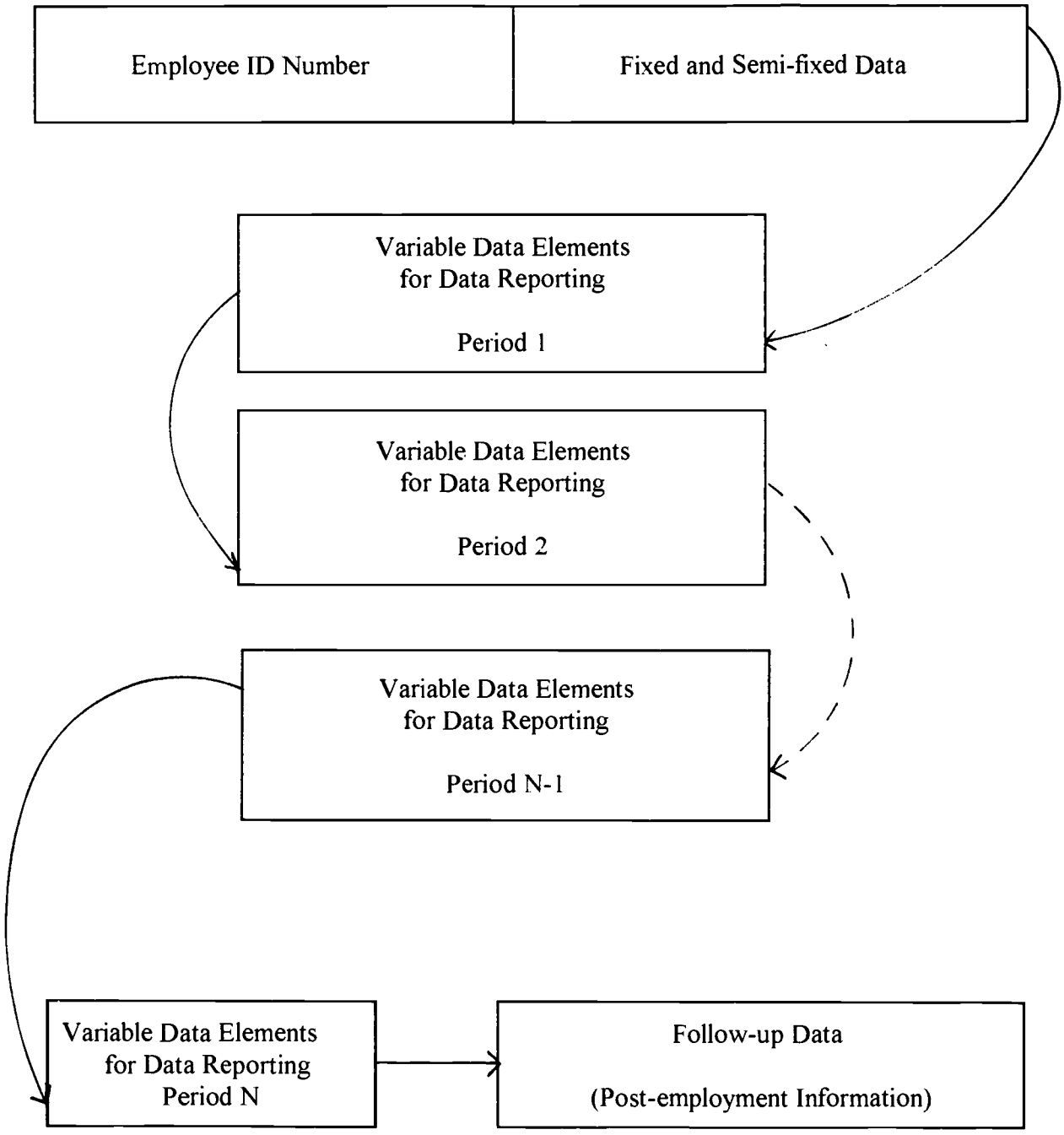


Figure 9
Categories of Data and Examples of Each

Data Category	Examples
Fixed	Gender Date of Birth Race/Ethnicity
Semi-fixed	Citizenship Disability Status Military Service Status
Variable (Term or Annual Reporting Period)	Assignments Salary Promotion
Derived	Age Total Number of Courses Taught or Number of Courses Taught During a Specific Data Reporting Period Frequency of Special Recognition Years of Service

A summary of all the data elements recommended for the human asset database is presented below:

Identifier and Demographic Descriptors

1. Personnel identification number
2. Gender
3. Date of birth
4. Race/ethnicity
5. Citizenship
6. Visa type
7. Country of visa
8. Country of birth/origin
9. Foreign language proficiency

10. Disability status
11. Military service status
12. Disabled veteran status
13. Student employee status

Academic History

1. Highest academic degree earned
2. Field/discipline of highest academic degree
3. Date of highest academic degree
4. Institution of highest academic degree
5. Terminal degree status
6. Field/discipline of master's degree
7. Date of master's degree
8. Institution of master's degree
9. Field/discipline of baccalaureate degree
10. Date of baccalaureate degree
11. Institution of baccalaureate degree
12. Professional license(s) held
13. Professional license(s) date of expiration
14. Nature of high school award
15. Date of high school award

Employment History at This Institution

1. Recruitment
   a. Initial salary offer status
   b. Start-up package - moving expenses
   c. Start-up package - summer contract
   d. Start-up package - lab equipment
   e. Start-up package - office equipment
   f. Start-up package - facilities
   g. Start-up package - human resources
   h. Primary assignment negotiation status
   i. Tenure offer at employment
   j. Starting salary
2. Employment
   a. Date of employment
   b. Type of previous employer
   c. Type of position at previous employer
   d. Academic rank at hire
   e. Creditable years at hire toward tenure
   f. Salary grade at hire

g. Salary step at hire

3. Maintenance
   a. Tenure status
   b. Tenure department
   c. Tenure decision date
   d. Graduate school faculty status
   e. Date of appointment to graduate school faculty
   f. Nature of most recent professional development activity
   g. Date of most recent professional development activity
4. Retention
   a. Type of most recent position change
   b. Date of most recent position change
   c. Counter salary offer status
   d. Date of counter salary offer

Current Year Employment Condition

1. Current year identifier
2. Position number
3. Home department
4. Discipline
5. EEOC classification
6. Title (institutional classification of position)
7. Academic rank
8. Appointment type
9. Term of appointment
10. Annualized FTE
11. Salary grade
12. Salary step
13. Base salary/wage
14. Supplemental salary/wage
15. Base fringe benefits
16. Supplemental fringe benefits
17. Base compensation
18. Supplemental compensation
19. Total annual salary/wage
20. Total annual compensation
21. Annualized salary/wage
22. Restricted funding source
23. FLSA status
24. Bargaining unit status
25. Leave status

Assignment/Utilization Activity

1. Reporting period identifier
2. Assignment allocation to instruction
3. Assignment allocation to research
4. Assignment allocation to public service
5. Assignment allocation to academic support
6. Assignment allocation to student services
7. Assignment allocation to institutional support
8. Assignment allocation to operation & maintenance of plant
9. Assignment allocation to professional development
10. Sections taught
    a. Course number
    b. Section number
    c. Course level
    d. Course credit hours
    e. Course clock hours
    f. Course contact hours
    g. Course type/format
    h. Instructional record status
    i. Responsibility share
    j. Number of enrollees
11. Number of undergraduate advisees
12. Number of baccalaureate level thesis committee assignments
13. Number of master's level thesis committee assignments
14. Number of dissertation committee assignments
15. Number of baccalaureate level theses supervised
16. Number of master's level theses supervised
17. Number of doctoral level dissertations supervised
18. Number of internships supervised
19. Number of new courses developed or innovative teaching materials prepared
20. Other workload assignments

Outputs

1. Credit hour production
2. Number of baccalaureate level thesis students completing this term
3. Number of master's level thesis students completing this term
4. Number of dissertation students completing this term
5. Performance evaluation rating
6. Student evaluation rating
7. Type of publications/presentations
8. Number of publications

9. Number of research grants funded
10. Dollar amount of research grants funded
11. Type of accomplishments/recognitions
12. Number of accomplishments/recognitions

Separation

1. Date of separation
2. Type of separation
3. Type of subsequent employer
4. Subsequent position
5. Subsequent salary

Chapter III Data Element Dictionary

This chapter contains the terms and data elements necessary for constructing and using a human asset database. This chapter is central in that it provides the standard terminology, definitions, and uniform methods for categorizing the data. Most of the data elements are already collected by many institutions, and many of the suggested data elements are already necessary for local, state, and federal reporting. It may be helpful to emphasize again that not all types of data described in this chapter will be kept on all employees, nor should all institutions maintain all categories of data.

To the extent possible, existing standard terminology is used and the source of definition noted. In selecting definitions and coding structures, first preference was given to federal standards or federally established institutional reporting requirements such as the Integrated Postsecondary Education Data System (IPEDS). Occasionally, element definitions were taken from systems developed by NCES, such as the national SPEEDE/ExPRESS Electronic Transcript or the Classification of Instructional Programs (CIP). When none of those sources provided guidance, definitions were constructed based on current postsecondary practices for longitudinal data-file construction and analysis, as reported by the National Center for Higher Education Management Systems (NCHEMS).

How to Read This Chapter

This chapter contains data elements clustered around seven major types of data terms: a) identifier and demographic descriptors, b) academic history, c) employment history at this institution, d) current year employment condition, e) assignment/utilization activity, f) outputs, and g) separation. A "data element" is a descriptive piece of information that can be used independently or in combination with other data elements to characterize or describe the population (e.g., ethnicity, military status, highest academic degree earned).

Each data element is presented on a separate page. Figure 10 displays a typical data-element page found in this chapter.

Figure 10
Typical Data Element Dictionary Page

Element Title:
Short Name:
Definition:
Element Length: **Element Type:** **Sequence Number:**
Codes:
Source of Definition:
Use of Data:

As this figure indicates, each data element has a title, and a short name for easy identification when creating file-processing labels. The definition serves to promote a standard terminology to be used by institutions and perhaps state and federal agencies.

An "element length" is the size of the element in bytes in a standard ASCII format under the recommended code structure, helpful for estimating required file sizes. "Element type" identifies the format of the element under the recommended code structure, either numeric or alphanumeric. "Sequence number" recommends where each element should appear. "Source of definition" identifies the actual source or sources used to develop the element's title, definition, and coding structure, and "use of data" briefly describes how the data element could be used analytically.

Note that in this document data elements are listed only once. That is, there is only one set of fields for information about a data element. When designing a database, it is useful to allow for the possibility of multiple entries. Multiple entries are those entries in which there is more than one instance of a data element occurring. For instance, there could be multiple entries possible for types of licenses held.

HUMAN ASSET DATA ELEMENT DICTIONARY

Identifier and Demographic Descriptors

1. Personnel identification number
2. Gender
3. Date of birth
4. Race/ethnicity
5. Citizenship
6. Visa type
7. Country of visa
8. Country of birth/origin
9. Foreign language proficiency
10. Disability status
11. Military service status
12. Disabled veteran status
13. Student employee status

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Personnel Identification Number

Short Name: SSN

Definition: The official number that serves to *uniquely* identify the employee. The employee's Social Security number is typically used for this element.

Element Length: 9 **Element Type**: N **Sequence Number**: 1

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: Used to identify and match records for successive reporting period files.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Gender

Short Name: SEX

Definition: The sex of the employee.

Element Length: 1 **Element Type**: A **Sequence Number**: 2

Codes:

F	Female
M	Male
U	Unknown or not available

Source of Definition: SPEEDE data element #1068

Use of Data: Supports the development of demographic statistics for institutional and external reporting.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Birth

Short Name: DOB

Definition: The calendar date of birth as designated on the employee's legal birth registration or certificate. Eight-digit numeric code in the form YYYYMMDD–for example, June 16, 1959=19590616.

Element Length: 8 **Element Type**: N **Sequence Number**: 3

Codes: Not applicable

Source of Definition: SPEEDE data element #1251

Use of Data: Used to calculate current age and age at time of employment.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Race/Ethnicity

Short Name: ETHNIC

Definition: Categories used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. Note that designations do not denote scientific definitions of anthropological origins. Typical categories and definitions include:

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America, or who maintains cultural identification through tribal affiliation or community recognition.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India and Vietnam. If specific subclassification is not known, then major category of 2.0 should be used.

African American/Black, Non-Hispanic: A person having origins in any of the black racial groups of Africa (except those of Hispanic origin).

White, Non-Hispanic: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race. If specific subclassification is not known, then major category of 5.0 should be used.

Element Length: 2 **Element Type**: N **Sequence Number**: 4

Codes:

1.0 American Indian or Alaskan Native
2.0 Asian or Pacific Islander
2.1 Chinese
2.2 Filipino
2.3 Japanese
2.4 Korean
2.5 Southeast Asian (e.g., Vietnamese, Laotian, Cambodian/Kampuchean)
2.6 Pacific Islander

3.0 African American/Black (Non-Hispanic)
4.0 White (Non-Hispanic)
5.0 Hispanic
5.1 Mexican, Mexican-American, Chicano
5.2 Cuban, Cubano
5.3 Puerto Rican, Puertoriqueno, or Bouricuan
6.0 Other
7.0 Unknown

Source of Definition: IPEDS

Use of Data: Supports the development of demographic statistics for institutional and external reporting.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Citizenship

Short Name: CITIZEN

Definition: The employee's nationality at the time of employment with the institution. Categories are:

United States Citizen: A person who is a citizen of the United States only, regardless of how his status was acquired.

Nonresident Alien: A person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely.

Resident Alien: Noncitizens who have been lawfully admitted to the United States for permanent residence and who hold a "green card," Form I-151.

Dual National: A person who is a citizen of more than one country.

Element Length: 1 **Element Type**: N **Sequence Number**: 5

Codes:

1	United States Citizen
2	Nonresident Alien
3	Resident Alien
4	Dual National

Source of Definition: NCHEMS - based on SPEEDE data element #1066 and IPEDS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Visa Type

Short Name: VISATYPE

Definition: The type of visa held by the employee. The codes most frequently utilized by postsecondary institutions are:

Temporary worker in a specialty occupation (e.g., research associate)

Exchange visitor

Intracompany transferee (e.g., an individual working in the United States who is transferred from a foreign owned company to its U.S. subsidiary)

Treaty trades or investor, spouse and children.

If additional visa types are needed, refer to the U.S. Immigration Regulations.

Element Length: 1 **Element Type**: N **Sequence Number**: 6

Codes:

1	H-1A: Temporary worker in a specialty occupation
2	J-1: Exchange visitor
3	L-1: Intracompany transferee
4	E-1 or E-2: Treaty trader or investor, spouse, and children

Source of Definition: U.S. Immigration Regulations

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Country of Visa

Short Name: VISACOUN

Definition: The country in which the employee's visa is granted.

Element Length: 2 **Element Type**: A **Sequence Number**: 7

Codes: Refer to appendix E, "Country Codes."

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Country of Birth/Origin

Short Name: BIRTHCOU

Definition: The employee's birth country.

Element Length: 2 **Element Type**: A **Sequence Number**: 8

Codes: Refer to appendix E, "Country Codes."

Source of Definition: *Codes for the Representation of Names of Countries*, American National Standard Institute

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Foreign Language Proficiency

Short Name: FORLANG

Definition: Any language or dialect, other than the employee's dominant language, in which the employee is proficient.

Element Length: 2 **Element Type**: A **Sequence Number**: 9

Codes: See appendix F for a list of languages and dialects.

Source of Definition: *Codes for the Representation of Names of Language*, American National Standards Institute

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Disability Status

Short Name: DISABLED

Definition: The designation of an employee's disability, handicap, or impairment that requires special arrangements.

Element Length: 1 **Element Type**: N **Sequence Number**: 10

Codes:

1	No Physical Impairment/Learning Disability
2	Hearing Impairment
3	Visual Impairment
4	Learning Disability
5	Mobility Impairment, Ambulatory
6	Mobility Impairment, Nonambulatory
7	Other Impairment
8	Multiple Impairments

Source of Definition: NCHEMS

Use of Data: Helps ensure compliance with the Americans with Disabilities Act (ADA).

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Military Service Status

Short Name: VET

Definition: The person's status in relation to military service, including:

Active duty member of the Armed Forces: A person who is serving on active duty as a member of the Armed Forces

Veteran: A person who has served on active duty as a member of the Armed Forces of the United States and was discharged or released from under conditions other than dishonorable. Does not include National Guard personnel and reservists called to active duty for civil disturbances, disasters, or training for a limited period.

Nonveteran: A person who is neither active duty nor a veteran.

Element Length: 1 **Element Type**: N **Sequence Number**: 11

Codes:

1	Active duty member of the Armed Forces
2	Veteran
3	Nonveteran

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Disabled Veteran Status

Short Name: DISVET

Definition: A code that indicates whether or not an employee has special disabled veteran status.

NOTE: If employee is a veteran, this element must be completed.

Element Length: 1 **Element Type**: N **Sequence Number**: 12

Codes:
1 Yes
2 No

Source of Definition: VETS-100 employment survey, U.S. Department of Labor, Office of the Assistant Secretary for Veterans Employment and Training

Use of Data: Required for completing federal contractor veteran's employment report.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Student Employee Status

Short Name: STUDEE

Definition: The code that indicates whether or not the individual's relationship with the institution is primarily as a student.

Element Length: 1 **Element Type**: N **Sequence Number**: 13

Codes:

0	Not a student
1	Graduate assistant/associate
2	Other student employee

Source of Definition: NCHEMS

Use of Data: Necessary to identify type of employee.

HUMAN ASSET DATA ELEMENT DICTIONARY

Academic History

1. Highest academic degree earned
2. Field/discipline of highest academic degree
3. Date of highest academic degree
4. Institution of highest academic degree
5. Terminal degree status
6. Field/discipline of master's degree
7. Date of master's degree
8. Institution of master's degree
9. Field/discipline of baccalaureate degree
10. Date of baccalaureate degree
11. Institution of baccalaureate degree
12. Professional license(s) held
13. Professional license(s) date of expiration
14. Nature of high school award
15. Date of high school award

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Highest Academic Degree Earned

Short Name: HIGDEGED

Definition: The highest degree, diploma, or certificate earned by the employee. This includes:

High School Diploma/GED: An award of a high school diploma or General Education Development (GED).

Certificates & Diplomas (less than one year): An award for the successful completion of a course of study or program offered by a postsecondary institution. Certificates and diplomas in this category are awarded for completion of any program covering any time span less than one academic year.

Certificates & Diplomas (more than or equal to one year): An award for the successful completion of a program offered by a postsecondary institution. Certificates and diplomas in this category are awarded for completion of any program covering any time span between one academic year and two academic years.

Associate Degree (two years or more): The degree granted upon completion of an educational program less than baccalaureate level and requiring at least two but less than four academic years of college work.

Bachelor's Degree: Any earned academic degree carrying the title of "bachelor."

First-professional Degree: The first earned degree in a professional field. By convention, only the following degrees should be included: M.D.; D.O.; L.L.B. or J.D.; D.D.S. or D.M.D.; D.V.M.; O.D.; B.D., M.Div., M.H.L., ordination; Pod.D. or D.P.; D. Phar.

Master's Degree: Any earned academic degree carrying the title of "master." In liberal arts and sciences, the degree customarily granted upon successful completion of one or two academic years of work beyond the bachelor's. In professional fields, an advanced degree beyond the first-professional which carries master's designation, e.g., L.L.M., M.S. (Master of Surgery), M.S.W. (Master of Social Work).

Specialists: An earned academic degree typically carrying the title of "specialists," education (Ed.S.).

Doctoral Degree: An earned academic degree carrying the title of "doctor." Not to be included are first-professional degrees such as M.D., D.D.S.

Other/Specify: Includes all other categories of degrees/diplomas/certificates that cannot be categorized in any of the preceding categories such as specialist degrees for work completed toward a certificate, e.g., Educational Specialist.

Element Length: 2 **Element Type**: N **Sequence Number**: 14

Codes:

1	High School Diploma/GED
2	Certificates & Diplomas (less than one year)
3	Certificates & Diplomas (more than or equal to one year)
4	Associate Degree (two years or more)
5	Bachelor's Degree
6	First-professional Degree
7	Master's Degree
8	Specialists
9	Doctoral Degree
10	Other/Specify

Source of Definition: IPEDS

Use of Data: To determine education level of workforce. To identify potential skills and resources available and to identify proportion of workforce that might require additional education.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Field/Discipline of Highest Academic Degree

Short Name: DISHGDEG

Definition: The identifier used to classify the subject area (discipline) in which the employee's highest academic degree can be associated. The 2-digit code of the NCES Classification of Instructional Programs (CIP) codes typically can be utilized for this purpose.

Element Length: 2 **Element Type**: N **Sequence Number**: 15

Codes: Two-digit CIP codes–see *Classification of Instructional Programs*, NCES, for specific codes.

Source of Definition: *Classification of Instructional Programs*, NCES

Use of Data: To identify the population's highest academic degree earned by academic degree programs.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Highest Academic Degree

Short Name: DTHIDEG

Definition: The month and year when the highest academic degree, diploma, or certificate was awarded. Six-digit numeric code of the form YYYYMM–for example, April 1990=199004.

Element Length: 6 **Element Type**: N **Sequence Number**: 16

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Institution of Highest Academic Degree

Short Name: INHIDEG

Definition: The institution from which the employee's highest academic degree was obtained. The 6-digit Unit ID code established by NCES is typically used for this element.

Element Length: 6 **Element Type**: N **Sequence Number**: 17

Codes: See *Directory of Postsecondary Institutions*, NCES, for specific codes.

Source of Definition: *Directory of Postsecondary Institutions*, NCES

Use of Data: For analysis of the institution's workforce.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Terminal Degree Status

Short Name: TERDEGST

Definition: A code to indicate whether the employee's highest degree is considered a "terminal" degree in that academic field.

Element Length: 1 **Element Type**: N **Sequence Number**: 18

Codes:

1 Highest degree is considered a "terminal" degree.
2 Highest degree is not considered a "terminal" degree.

Source of Definition: NCHEMS

Use of Data: To identify percentage of institution's workforce with terminal degrees.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Field/Discipline of Master's Degree

Short Name: DISMAST

Definition: The subject area (discipline) in which the employee's master's degree can be associated. The 2-digit code of the NCES Classification of Instructional Programs (CIP) codes typically can be utilized for this purpose.

Element Length: 2 **Element Type**: N **Sequence Number**: 19

Codes: See *Classification of Instructional Programs*, NCES, for specific codes.

Source of Definition: *Classification of Instructional Programs*, NCES

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Master's Degree

Short Name: DTMADEG

Definition: The month and year when the Master's degree was awarded. A 6-digit numeric code of the form YYYYMM--for example, April 1990=199004.

Element Length: 6 **Element Type**: N **Sequence Number**: 20

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Institution of Master's Degree

Short Name: INMADEG

Definition: The institution from which the employee's master's degree was obtained. The 6-digit Unit ID code established by NCES is typically used for this element.

Element Length: 6 **Element Type**: N **Sequence Number**: 21

Codes: See *Directory of Postsecondary Institutions*, NCES, for specific codes.

Source of Definition: *Directory of Postsecondary Institutions*, NCES

Use of Data: To analyze portion of workforce having degrees from employing institution.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Field/Discipline of Baccalaureate Degree

Short Name: DISBADEG

Definition: The subject area (discipline) in which the employee's baccalaureate degree can be associated. The 2-digit code of the Classification of Instructional Programs (CIP) codes typically can be utilized for this purpose.

Element Length: 2 **Element Type**: N **Sequence Number**: 22

Codes: See *Classification of Instructional Programs*, NCES, for specific codes.

Source of Definition: *Classification of Instructional Programs*, NCES

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Baccalaureate Degree

Short Name: DTBADEG

Definition: The month and year when the baccalaureate degree was awarded. Six-digit numeric code of the form YYYYMM–for example, April 1990=199004.

Element Length: 6 **Element Type**: N **Sequence Number**: 23

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Institution of Baccalaureate Degree

Short Name: INBADEG

Definition: The code used to identify the institution from which the employee's baccalaureate degree was obtained. The 6-digit Unit ID code established by NCES is typically used for this element.

Element Length: 6 **Element Type**: N **Sequence Number**: 24

Codes: See *Directory of Postsecondary Institutions*, NCES, for specific codes.

Source of Definition: *Directory of Postsecondary Institutions*, NCES

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Professional License(s) Held

Short Name: PROFLICS

Definition: Specific credentials entitling the employee to engage in legal practice of a profession.

Element Length: 2 **Element Type**: N **Sequence Number**: 25

Codes:

01	Board certified in medical specialty
02	Licensure as a physician
03	Licensure as a registered professional nurse
04	Licensure as a practical nurse
05	Certification as an advanced registered nurse
06	Certification as a registered nurse anesthetist
07	Certification as a general radiographer
08	Licensure as a clinical laboratory supervisor
09	Certification as an emergency medical technician
10	Certification as a paramedic
11	Licensure as a dentist
12	Licensure as a dental hygienist
13	Licensure as a optometrist
14	Licensure as a pharmacist
15	Licensure as a physical therapist
16	Licensure as a clinical laboratory technician
17	Certification for cardio-pulmonary resuscitation
18	Member of the bar
19	Registered professional engineer
20	Teaching certificate
21	Certified public accountant
22	Professional appraiser
23	Registration as an architect
24	Certification as a correctional officer
25	Mandatory retraining for correctional officer
26	Criminal justice standards and training certificate of compliance
27	Certificate of compliance as a firefighter
28	Society of actuaries
29	Casualty actuarial society
30	Certified financial examiner

31 Word processing certificate
32 Inspection and training certification
33 Primary weapon qualification
34 Secondary weapon qualification
35 Licensure for pilot
36 Certification for sky diver
37 Licensure for vessel captain
38 Certification for scuba diver
39 Licensed professional geologist
40 Licensure as electrician
41 Licensure as carpenter
42 Licensure as plumber
43 Licensure as pipefitter
44 Licensure as millwright
45 Commercial drivers license
46 Notary public certificate

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Professional License(s) Date of Expiration

Short Name: EXDTPLIC

Definition: The month and year when the professional license(s) expire. Six-digit numeric code of the form YYYYMM–for example, May 1993=199305.

Element Length: 6 **Element Type**: N **Sequence Number**: 26

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Nature of High School Award

Short Name: HSARD

Definition: An academic award granted for completion of a high school program, or a certificate indicating equivalent education.

Element Length: 1 **Element Type**: N **Sequence Number**: 27

Codes:

1	High School Diploma
2	General Education Development (GED)
3	None

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of High School Award

Short Name: DTHSARD

Definition: The month and year when the high school award was made. Six-digit numeric code of the form YYYYMM–for example, June 1990=199006.

Element Length: 6 **Element Type**: N **Sequence Number**: 28

Codes: Not applicable

Source of Definition: NCHEMS

Employment History at This Institution

1. Recruitment
   a. Initial salary offer status
   b. Start-up package - moving expenses
   c. Start-up package - summer contract
   d. Start-up package - lab equipment
   e. Start-up package - office equipment
   f. Start-up package - facilities
   g. Start-up package - human resources
   h. Primary assignment negotiation status
   i. Tenure offer at employment
   j. Starting salary

2. Employment
   a. Date of employment
   b. Type of previous employer
   c. Type of position at previous employer
   d. Academic rank at hire
   e. Creditable years at hire toward tenure
   f. Salary grade at hire
   g. Salary step at hire

3. Maintenance
   a. Tenure status
   b. Tenure department
   c. Tenure decision date
   d. Graduate school faculty status
   e. Date of appointment to graduate school faculty
   f. Nature of most recent professional development activity
   g. Date of most recent professional development activity

4. Retention
   a. Type of most recent position change
   b. Date of most recent position change
   c. Counter salary offer status
   d. Date of counter salary offer

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Initial Salary Offer Status

Short Name: INSALOFF

Definition: Status of the initial salary offer made by the institution to recruit an employee.

Element Length: 1 **Element Type**: N **Sequence Number**: 29

Codes:

1	Salary accepted as offered
2	Reoffered less than or equal to $1,000 more than the initial offer and accepted
3	Reoffered $1,001 to $2,500 more than the initial offer and accepted
4	Reoffered $2,501 to $5,000 more than the initial offer and accepted
5	Reoffered $5,001 to $9,999 more than the initial offer and accepted
6	Reoffered more than or equal to $10,000 more than the initial offer and accepted
7	Not known

Source of Definition: NCHEMS

Use of Data: To determine competitiveness of institutional offers to employees.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Moving Expenses

Short Name: MOVEXPEN

Definition: The dollar amount committed by the institution for the expense associated with relocation of the employee to your campus/community. For example, if the institution paid moving expenses totaling $3,500=3500. If no moving expenses were paid for this employee, enter zero as the dollar amount.

Element Length: 5 **Element Type**: N **Sequence Number**: 30

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Summer Contract

Short Name: SUMCONT

Definition: The dollar amount committed by the institution as a promise of summer employment made at the time of initial hiring. For example, if $5,000 was committed for a summer stipend=5000. If no summer stipend was committed for this employee, enter zero as the dollar amount.

Element Length: 5 **Element Type**: N **Sequence Number**: 31

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Lab Equipment

Short Name: EQUPLAB

Definition: The dollar amount committed by the institution for the purchase of laboratory equipment as part of the offer made in the process of hiring an employee. For example, if $10,000 was used to purchase lab equipment specifically for this employee=10000. If no laboratory equipment was purchased for this employee, enter zero as the dollar amount.

Element Length: 8 **Element Type**: N **Sequence Number**: 32

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Office Equipment

Short Name: EQUIPOFF

Definition: The dollar amount committed by the institution for the purchase of office equipment (e.g., personal computer) as part of the offer made in the process of hiring an employee. For example, if $7,500 was used to purchase office equipment specifically for this employee=7500. If no office equipment was purchased for this employee, enter zero as the dollar amount.

Element Length: 5 **Element Type**: N **Sequence Number**: 33

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Facilities

Short Name: FACILITS

Definition: The dollar amount committed by the institution for the construction or renovation of facilities as part of the process of hiring an employee. For example, if $10,000 was used to renovate facilities specifically for this employee=10000. If no identifiable expenditures were made for this employee, enter zero as the dollar amount.

Element Length: 8 **Element Type**: N **Sequence Number**: 34

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Start-up Package - Human Resources

Short Name: HUMRESSU

Definition: The dollar amount committed by the institution for support of personnel (clerical, graduate assistants, part-time personnel to compensate for reduced loads, etc.) as part of the process of hiring an employee. For example, if $10,000 was used for support personnel associated with hiring this employee = 10000. If no identifiable expenditures for support personnel were associated with hiring an employee, enter zero as the dollar amount.

Element Length: 6 **Element Type**: N **Sequence Number**: 35

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Primary Assignment Negotiation Status

Short Name: PRIASNS

Definition: Modifications made to typical workloads or primary assignment in an effort to recruit this employee.

Element Length: 1 **Element Type**: N **Sequence Number**: 36

Codes:

1	Reduction in teaching assignment
2	Reduction in research assignment
3	Reduction in service assignment
4	No modifications to the "typical" (as defined by institution) workload were offered

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Tenure Offer at Employment

Short Name: TENOFEMP

Definition: Indication of whether an offer of tenure was made as part of the hiring offer made to this employee.

Element Length: 1 **Element Type**: N **Sequence Number**: 37

Codes:

1	Yes
2	No

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Starting Salary

Short Name: STARTSAL

Definition: The dollar amount of the employee's salary at the initial employment at the institution.

Element Length: 6 **Element Type**: N **Sequence Number**: 38

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine the full costs associated with hiring an individual.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Employment

Short Name: DTEMPLOY

Definition: The month, day, and year employment at the institution began. An eight-digit numerical code of the form YYYYMMDD–for example, February 9, 1990=19900209. This date should not change.

Element Length: 8 **Element Type**: N **Sequence Number**: 39

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To determine length of employment and to determine average longevity periods among subpopulations of workforce. Also used to determine potential retirement date and to identify when proportion of workforce might retire after a certain number of years of service to the institution.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Previous Employer

Short Name: PREVEMP

Definition: The type of employer for whom the employee worked just prior to employment at this institution.

Element Length: 6 **Element Type**: A **Sequence Number**: 40

Codes: Refer to Standard Industry Classification for major categories. If the prior employer was an institution of postsecondary education, the 6-digit Unit ID code established by NCES should be added as an additional element.

Source of Definition: Standard Industry Classifications

Use of Data: Useful for identifying potential recruiting sources and possible levels of orientation needed into postsecondary environment.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Position at Previous Employer

Short Name: PREVEMPP

Definition: The general classification of the position held by the individual at the place of previous employment. Typical classifications include:

Executive/administrative/managerial professionals: Exempt employees employed for the primary purposes of managing the institution or a customarily recognized department or subdivision thereof. By convention this category includes deans but most commonly, although not always, will exclude chairs of academic departments (who usually are classified as instruction/research professionals). Inclusion in this category requires the individual to have supervisory responsibilities.

Instruction/research professionals: Employees with the primary purpose of performing instruction and research activities.

Specialist/support professionals: Exempt employees employed for the primary purposes of performing (typically) academic support, student service, and institutional support activities. Excludes individuals who have executive or managerial (supervisory) responsibilities in these areas. Includes such employees as librarians, accountants, systems analysts, student personnel workers, counselor, salespeople, recruiters, and so forth.

Technical employees: Individuals employed for the primary purpose of performing technical activities (that is, activities pertaining to the mechanical or industrial arts or the applied sciences). This category includes only nonexempt employees.

Office/clerical employees: Individuals employed for the primary purpose of performing clerical activities. This category includes only nonexempt employees.

Crafts/trades employees: Individuals employed for the primary purpose of performing (manually) skilled activities in a craft or trade. Includes such employees as carpenters, plumbers, electricians, and so forth. Includes only nonexempt employees.

Service employees: Individuals employed for the primary purpose of performing service (often uncertified) activities. Includes such employees as custodians, groundskeepers, security guards, food service workers, and so forth. Includes only nonexempt employees.

Other

Refer to appendix A for additional information.

Element Length: 1 **Element Type**: N **Sequence Number**: 41

Codes:

1	Executive/administrative/managerial professionals
2	Instruction/research professionals
3	Specialist/support professionals
4	Technical
5	Office/clerical
6	Crafts/trades
7	Service
8	Other

Source of Definition: Equal Employment Opportunity Commission (EEOC)

Use of Data: Useful for identifying potential recruiting sources and possible levels of orientation needed into postsecondary environment.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Academic Rank at Hire

Short Name: RANKHIRE

Definition: The rank at time of hire of an employee appointed to a faculty position. These include:

Professor: Faculty designated by the rank of professor.

Associate Professor: Faculty designated by the rank of associate professor.

Assistant Professor: Faculty designated by the rank of assistant professor.

Instructor: Faculty designated by the rank of instructor.

Lecturer: Faculty designated by the rank of lecturer.

Teaching Assistant/Associate: Faculty designated as teaching assistant/ associate. Generally created for and staffed by people with graduate student status at the employing institution. May also be known as teaching fellows, associates, or graduate assistants.

Research Assistant/Associate: Faculty designated as research assistant/ associate. Generally created for and staffed by people with graduate student status at the employing institution. May also be known as research fellows, associates, or graduate assistants.

No Rank: For use by institutions that do not designate faculty members by rank.

Undesignated: Are specially designated faculty not included in the rank categories. These would include visiting scholar and other special ranks.

Not Applicable: An employee that is *not* appointed to the faculty as primary assignment.

Element Length: 2 **Element Type**: N **Sequence Number**: 42

Codes: 1 Professor

2 Associate Professor
3 Assistant Professor
4 Instructor
5 Lecturer
6 Teaching Assistant/Associate
7 Research Assistant/Associate
8 No Rank
9 Undesignated
10 Not Applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Creditable Years at Hire Toward Tenure

Short Name: CREDYRHI

Definition: The number of years toward tenure an employee is awarded at time of hire with the institution. For example, three years of credit=03.

Element Length: 2 **Element Type**: N **Sequence Number**: 43

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate the time by which the tenure decision must be made.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Salary Grade at Hire

Short Name: SALGRDHI

Definition: The institutionally defined salary grade assigned to the employee.

Element Length: – **Element Type**: N **Sequence Number**: 44

Codes: Institutionally defined

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Salary Step at Hire

Short Name: SALSTPHI

Definition: The step within the salary grade assigned to the employee at time of hire. Typically associated with the number of years the employee has been classified in the salary grade.

Element Length: – **Element Type**: N **Sequence Number**: 45

Codes: Institutionally defined

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Tenure Status

Short Name: TENSTAT

Definition: The status of the employee with respect to tenure. These include:

Tenured	Individual has been granted tenure at the institution.
Nontenured	Individual is eligible for tenure (i.e., is on the tenure track) but has not been granted tenure.
Not eligible	Individual has not received tenure and has been hired into a position that is not eligible for tenure.

Element Length: 1 **Element Type**: N **Sequence Number**: 46

Codes:

1 Tenured
2 Nontenured
3 Not eligible

Source of Definition: NCHEMS

Use of Data: To calculate proportion of instruction/research workforce holding tenure status.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Tenure Department

Short Name: TENDEPT

Definition: The department in which the employee receives tenure.

Element Length: – **Element Type**: A **Sequence Number**: 47

Codes: Institutionally defined

Source of Definition: Not applicable

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Tenure Decision Date

Short Name: DTTENURE

Definition: The month, day, and year the decision was or will be made on the employee's tenure status. Eight-digit numeric code in the form YYYYMMDD–for example, June 16, 1999=19990616.

Element Length: 8 **Element Type**: N **Sequence Number**: 48

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To identify those individuals about whom tenure decisions must be made at specified periods of time.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Graduate School Faculty Status

Short Name: GRADSTAT

Definition: The employee's status as a graduate school faculty member. Typical status includes:

Graduate School Faculty: Appointed as a graduate school faculty member.

Eligible - Not Appointed: Eligible for appointment to graduate school faculty but not yet appointed.

Not Eligible: Not eligible for appointment to graduate school faculty.

Element Length: 1 **Element Type**: N **Sequence Number**: 49

Codes:

1	Graduate School Faculty
2	Eligible - Not Appointed
3	Not Eligible

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Appointment to Graduate School Faculty

Short Name: DTGRADST

Definition: The month, day, and year the decision was made on employee's status as a graduate school faculty member. An 8-digit numeric code of the form YYYYMMDD–for example, January 4, 1993=19930104.

Element Length: 8 **Element Type**: N **Sequence Number**: 50

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Nature of Most Recent Professional Development Activity

Short Name: NATPRODV

Definition: The characteristic of the formally assigned (institutionally sponsored/recognized) activity in which the individual engaged for purposes of improving knowledge and skills to be applied in the work setting.

Element Length: 1 **Element Type**: N **Sequence Number**: 51

Codes:

1 Sabbatical
2 Academic coursework
3 Short course
4 Professional organization - elected officer
5 Professional organization - appointed officer
6 Other

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Most Recent Professional Development Activity

Short Name: DTPRODEV

Definition: The month and year in which the most recent professional development activity was concluded. A 6-digit numeric code in the form YYYYMM–for example, May 1993=199305. This element would be repeated for each occurrence.

Element Length: 6 **Element Type**: N **Sequence Number**: 52

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To identify those individuals who have not had the benefit of a professional development activity within X years.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Most Recent Position Change

Short Name: TTPOSCHG

Definition: The type of the most recent position change for an employee. Institutions may wish to develop an internal list. This element would be repeated for each occurrence.

Element Length: 1 **Element Type**: N **Sequence Number**: 53

Codes:

1	Promotion
2	Demotion
3	Lateral
4	From faculty appointment to administrative appointment
5	From administrative appointment to faculty appointment

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Most Recent Position Change

Short Name: DTPOSCHG

Definition: The month, day, and year on which the employee's most recent position change took place. An 8-digit numeric code in the form YYYYMMDD–for example, May 11, 1992=19920511. This date represents date of employment in current position. This element would be repeated for each occurrence.

Element Length: 8 **Element Type**: N **Sequence Number**: 54

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Counter Salary Offer Status

Short Name: COUNSALO

Definition: The status of a counter salary offer made in an effort to retain an employee who has a current, firm offer from another potential employer.

Element Length: 1 **Element Type**: N **Sequence Number**: 55

Codes:

1	Counter salary offer not made
2	Counter salary offer less than or equal to $1,000 more than current salary and accepted
3	Counter salary offer $1,001 to $2,500 more than current salary and accepted
4	Counter salary offer $2,501 to $5,000 more than current salary and accepted
5	Counter salary offer $5,001 to $9,999 more than current salary and accepted
6	Counter salary offer more than or equal to $10,000 more than current salary and accepted
7	Nonmonetary counter offer made and accepted

Source of Definition: NCHEMS

Use of Data: To indicate "competitiveness" of institutional salaries.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Counter Salary Offer

Short Name: DTCOUSAL

Definition: The month, day, and year on which the counter salary offer was made and accepted. An 8-digit numeric code in the form YYYYMMDD–for example, October 1, 1993=19931001.

Element Length: 8 **Element Type**: N **Sequence Number**: 56

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To indicate point in which salary change will become effective.

HUMAN ASSET DATA ELEMENT DICTIONARY

Current Year Employment Condition

1. Current year identifier
2. Position number
3. Home department
4. Discipline
5. EEOC classification
6. Title (institutional classification of position)
7. Academic rank
8. Appointment type
9. Term of appointment
10. Annualized FTE
11. Salary grade
12. Salary step
13. Base salary/wage
14. Supplemental salary/wage
15. Base fringe benefits
16. Supplemental fringe benefits
17. Base compensation
18. Supplemental compensation
19. Total annual salary/wage
20. Total annual compensation
21. Annualized salary/wage
22. Restricted funding source
23. FLSA status
24. Bargaining unit status
25. Leave status

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Current Year Identifier

Short Name: CURRYEAR

Definition: The identifier of the institutional fiscal year to which the data in this data module pertain. A 4-digit numeric code in the form YYYY–for example, fiscal year 1991-92=1992.

Element Length: 4 **Element Type**: N **Sequence Number**: 57

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To identify current fiscal year in data reporting period.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Position Number

Short Name: POSNUM

Definition: A numeric code that uniquely identifies the institutional position filled by the individual. Determined by institution.

Element Length: – **Element Type**: A **Sequence Number**: 58

Codes: Institutionally assigned

Source of Definition: Institution

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Home Department

Short Name: HOMDEP

Definition: The current department or other organization division that has fiscal, programmatic, and administrative responsibilities to which the employee is attached for purposes of personnel assignment and reporting. Determined by institution.

Element Length: – **Element Type**: A **Sequence Number**: 59

Codes: Institutionally assigned

Source of Definition: Institution

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Discipline

Short Name: DISCIP

Definition: The 2-digit code of the NCES Classification of Instructional Programs (CIP) that identifies the current academic discipline of the employee.

Element Length: 2 **Element Type**: N **Sequence Number**: 60

Codes: For specific 2-digit CIP codes, see *Classification of Instructional Programs*, NCES.

Source of Definition: *Classification of Instructional Programs*, NCES

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: EEOC (Equal Employment Opportunity Commission) Classification

Short Name: EEOC

Definition: The human asset category into which the individual's position is most appropriately classified. See appendix A for definitions and descriptions of each category.

Element Length: 1 **Element Type**: N **Sequence Number**: 61

Codes:

1	Executive/administrative/managerial professionals
2	Instruction/research professional
3	Specialist/support professionals
4	Technical employees
5	Office/clerical employees
6	Crafts/trades employees
7	Service employees

Source of Definition: Equal Employment Opportunity Commission (EEOC)

Use of Data: To determine classifications of employees; required for state and federal reporting.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Title (Institutional Classification of Position)

Short Name: TITLE

Definition: A code that identifies the employee's current institutional job title. Determined by institution.

Element Length: – **Element Type**: A **Sequence Number**: 62

Codes: Institutionally defined

Source of Definition: Institution

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Academic Rank

Short Name: FACRANK

Definition: The current rank of the faculty member. These include:

Professor: Faculty designated by the rank of professor.

Associate Professor: Faculty designated by the rank of associate professor.

Assistant Professor: Faculty designated by the rank of assistant professor.

Instructor: Faculty designated by the rank of instructor.

Lecturer: Faculty designated by the rank of lecturer.

Teaching Assistant/Associate: Faculty designated as teaching assistant/ associate. Generally created for and staffed by people with graduate student status at the employing institution. May also be known as teaching fellows, associates, or graduate assistants.

Research Assistant/Associate: Faculty designated as research assistant/ associate. Generally created for and staffed by people with graduate student status at the employing institution. May also be known as research fellows, associates, or graduate assistants.

No Rank: For use by institutions that do not designate instructional faculty by rank.

Undesignated: Are specially designated faculty not included in the rank categories. These would include visiting scholar and other special ranks (emeritus faculty).

Not applicable: An employee that is *not* appointed to the faculty as primary assignment.

Element Length: 2 **Element Type**: N **Sequence Number**: 63

Codes:

1	Professor
2	Associate Professor

3 Assistant Professor
4 Instructor
5 Lecturer
6 Teaching Assistant/Associate
7 Research Assistant/Associate
8 No Rank
9 Undesignated
10 Not applicable

Source of Definition: NCHEMS

Use of Data: To determine proportion of faculty at each rank for planning and budgeting. Needed for state and federal reporting.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Appointment Type

Short Name: APPTYPE

Definition: The type of current appointment by total contracted percentage of time; the nature of the individual's relationship with the institution. Typical appointments are:

Full-time	Employee available for full-time assignment for the contracted period of time. Normally, employees who work approximately 40 hours per week are considered full-time.
Part-time	Employee not available for 100 percent assignment and employed on an ongoing basis.
Casual	Employee who is employed to assist with specific institutional activities (e.g., registration or drop-add period) and may perform those services on a full-time or part-time basis.

Element Length: 1 **Element Type**: N **Sequence Number**: 64

Codes:

1	Full-time
2	Part-time
3	Casual

Source of Definition: NCHEMS

Use of Data: To identify workforce available according to type of appointment.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Term of Appointment

Short Name: APPTERM

Definition: The date on which the employee's appointment at the institution will terminate without renewal or reappointment by the institution. A 6-digit code of the form YYYYMM–for example, May 1993=199305. In the case of indefinite appointments, the code should be "999999."

Element Length: 6 **Element Type**: N **Sequence Number**: 65

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Annualized FTE

Short Name: FTE

Definition: The proportion of time an employee is expected to devote to institutional employment over the course of a 12-month period. For example, a half-time, 6-month appointment would be (.50 x 6 months)÷12=.25 FTE.

Element Length: 3 **Element Type**: N **Sequence Number**: 66

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate the total amount of human asset available to the institution over a period of time.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Salary Grade

Short Name: SALGRD

Definition: The institutionally defined numeric salary grade assigned to the employee.

Element Length: – **Element Type**: N **Sequence Number**: 67

Codes: Institutionally defined

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Salary Step

Short Name: SALSTP

Definition: The step within the salary grade assigned to the employee. Typically associated with the number of years the employee has been classified in the salary grade. Determined by institution.

Element Length: – **Element Type**: N **Sequence Number**: 68

Codes: Institutionally defined

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Base Salary/Wage

Short Name: SALARY

Definition: The salary paid to the employee during the current appointment period. This is for salary only and does not include benefits. Supplemental salary such as overload pay is excluded.

Element Length: 7 **Element Type**: N **Sequence Number**: 69

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Supplemental Salary/Wage

Short Name: SUPSAL

Definition: Salary or wage paid to the employee during the current appointment period in addition to those included in the base salary. Includes overtime, overload, and summer pay for employees on a 9-month contract. This includes salary only and excludes fringe benefits.

Element Length: 7 **Element Type**: N **Sequence Number**: 70

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Base Fringe Benefits

Short Name: BASEBEN

Definition: The cost of fringe benefits paid on behalf of the employee in conjunction with base salary/wage. Includes those benefits for which the institution incurs a direct cost (medical insurance, life and disability insurance, workman's compensation and unemployment insurance, FICA, tuition assistance, and pension plan contributions) as well as those which have an indirect cost/value (sick leave, holidays, vacations, tuition waivers).

Element Length: 6 **Element Type**: N **Sequence Number**: 71

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Supplemental Fringe Benefits

Short Name: SUPBEN

Definition: The cost of fringe benefits paid on behalf of the employee in conjunction with supplemental salary/wages. As a minimum, usually includes FICA and pension payments, but may include a wide range of other benefits as well.

Element Length: 6 **Element Type**: N **Sequence Number**: 72

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Base Compensation

Short Name: COMPEN

Definition: The sum of base salary/wage and base fringe benefits.

Element Length: 7 **Element Type**: N **Sequence Number**: 73

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Supplemental Compensation

Short Name: SUPCOMP

Definition: The sum of supplemental salary/wage and supplemental fringe benefits.

Element Length: 7 **Element Type**: N **Sequence Number**: 74

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Total Annual Salary/Wage

Short Name: TOTSAL

Definition: The salary/wage paid to the employee over the course of a 12-month period. Overload, summer, or other salary are included. The sum of base salary and supplemental salary/wage. Benefits are excluded.

Element Length: 7 **Element Type**: N **Sequence Number**: 75

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Total Annual Compensation

Short Name: TOTCOMP

Definition: The total dollar amount of compensation (total annual salary/wage and total fringe benefits) that an employee receives over the course of a 12-month period. Overload, summer, or other additional compensation are included.

Element Length: 7 **Element Type**: N **Sequence Number**: 76

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Annualized Salary/Wage

Short Name: ANNSAL

Definition: The base salary/wage of the employee divided by the proportion of a full-time (12-month) appointment covered by the salary. The annualized salary/wage for an employee earning $50,000 in a full-time appointment is $50,000. The annualized salary for an employee earning $30,000 for a 9-month period for a half-time appointment is $80,000 [$30,000÷(.75 x .5)].

Element Length: 7 **Element Type**: N **Sequence Number**: 77

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Restricted Funding Source

Short Name: RESFUND

Definition: The percentage of salary for a given time period (usually per term) that comes from restricted contract or grant monies. If 40 percent of the employee's salary comes from these areas=40. If no percentage of the employee's salary is paid from these sources=0.

Element Length: 3 **Element Type**: N **Sequence Number**: 78

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: FLSA Status

Short Name: FLSA

Definition: The current status of an employee as "exempt" or "nonexempt." Exempt employees are those employees whose conditions of employment and compensation are *not* subject to the provision of the Fair Labor Standards Act (FLSA), as amended. Exempt employees are not eligible for overtime payment. Nonexempt employees are those whose conditions of employment and compensation are subject to the FLSA and are eligible for overtime.

Element Length: 1 **Element Type**: N **Sequence Number**: 79

Codes:

1	Exempt
2	Nonexempt

Source of Definition: Fair Labor Standards Act (FLSA)

Use of Data: Required for state and federal reporting.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Bargaining Unit Status

Short Name: BARGUNST

Definition: The employee's status in reference to the collective bargaining unit. Statuses include:

Not Eligible/Not Applicable: Employee is not eligible or not applicable to a collective bargain unit.

In Unit-eligible Member: Employee is eligible to be a part of a collective bargain unit and is a member of that unit.

In Unit-eligible Nonmember: Employee is eligible to be a part of a collective bargain unit but is not a member of that unit.

Element Length: 1 **Element Type**: N **Sequence Number**: 80

Codes:

1	Not Eligible/Not Applicable
2	In Unit-eligible Member
3	In Unit-eligible Nonmember

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Leave Status

Short Name: LEAVSTAT

Definition: The conditions under which the employee is on leave from the institution.

Element Length: 1 **Element Type**: N **Sequence Number**: 81

Codes:

1 Sabbatical
2 Leave with pay
3 Leave without pay

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Assignment/Utilization Activity

1. Reporting period identifier
2. Assignment allocation to instruction
3. Assignment allocation to research
4. Assignment allocation to public service
5. Assignment allocation to academic support
6. Assignment allocation to student services
7. Assignment allocation to institutional support
8. Assignment allocation to operation & maintenance of plant
9. Assignment allocation to professional development
10. Sections taught
    a. Course number
    b. Section number
    c. Course level
    d. Course credit hours
    e. Course clock hours
    f. Course contact hours
    g. Course type/format
    h. Instructional record status
    i. Responsibility share
    j. Number of enrollees
11. Number of undergraduate advisees
12. Number of baccalaureate level thesis committee assignments
13. Number of master's level thesis committee assignments
14. Number of dissertation committee assignments
15. Number of baccalaureate level theses supervised
16. Number of master's level theses supervised
17. Number of doctoral level dissertations supervised
18. Number of internships supervised
19. Number of new courses developed or innovative teaching materials prepared
20. Other workload assignments

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Reporting Period Identifier

Short Name: TERMID01

Definition: Period to which all of the following elements in the data module apply, commonly considered academic term. Enter the four digits for the year and the term code (YYYYT).

Element Length: 5 **Element Type**: N **Sequence Number**: 82

Codes:

1 Fall
2 Winter
3 Spring
4 Summer
5 Summer A
6 Summer B
7 Trimester session
8 Other session

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Instruction

Short Name: ASGINSTR

Definition: The percentage of effort assigned to instruction. Instructional activities are those performed by individuals that support credit and noncredit instructional offerings by a postsecondary institution. The instructional category typically includes general academic instruction; occupational and vocational instruction; special session instruction; community education; preparatory and adult basic education; and remedial and a tutorial instruction conducted by the teaching faculty for the institution's students. If the employee is assigned 100 percent of time to instruction=100; if the employee has no assignment to instruction=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 83

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Research

Short Name: ASGRSRCH

Definition: The *percentage* of effort assigned to *research*. Research activities are those performed by individuals that are organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted within the institution. If the employee is assigned 100 percent of time to research=100; if the employee has no assignment to research=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 84

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Public Service

Short Name: ASGPUBSV

Definition: The percentage of effort assigned to public service. Public service activities are those performed by individuals relating to programs established to make available to the public the various unique resources and capabilities of the institution for the various specific purposes of responding to a community need or solving a community problem. Includes provision of institutional facilities as well as those services of the faculty and staff that are made available outside the context of the institution's required instruction and research activities. If the employee is assigned 100 percent of time to public service=100; if the employee has no assignment to public service=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 85

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Academic Support

Short Name: ASGACSUP

Definition: The percentage of effort assigned to academic support. Academic support activities are those performed by individuals that carry out direct support of one or more of the three primary programs (instruction, research, public service). The activities that should be classified in this program include (1) activities related to the preservation, maintenance, and display of both the stock of knowledge and educational materials (for example, library services and museums); (2) activities that directly contribute to the way in which instruction is delivered or research is conducted (such as educational media services, academic computing support, ancillary support); (3) activities directly related to the administration of academic programs; and (4) activities related to the professional development of academic personnel. The activities that should be classified in the academic support program differ from those classified in the other support programs in that they are carried out in *direct* support of one or more of the three primary programs. If the employee is assigned 100 percent of time to academic support=100; if the employee has no assignment to academic support=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 86

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Student Services

Short Name: ASGSTUSV

Definition: The percentage of effort assigned to student services. Student services activities are those performed by individuals that carry out the objective of contributing to the emotional and physical well-being of the students, as well as to their intellectual, cultural, and social development outside the context of the institution's formal instruction program. If the employee is assigned to student services=100; if the employee has no assignment to student services=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 87

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Institutional Support

Short Name: ASGINSUP

Definition: The percentage of effort assigned to institutional support. Institutional support activities are those performed by individuals that provide for both the day-to-day functioning and the long-range viability of the institution as an operating organization. The overall objective of the institutional support function is to provide for the institution's organizational effectiveness and continuity. If the employee is assigned 100 percent of time to institutional support=100; if the employee has no assignment to institutional support=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 88

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Operation & Maintenance of Plant

Short Name: ASGOMPLT

Definition: The percentage of effort assigned to operation and maintenance (O&M) of plant. Operation and maintenance of plant activities are those performed by individuals that are related to maintaining existing grounds and facilities, providing utility services, and planning and designing future plant expansions and modifications. If the employee is assigned 100 percent of time to O&M=100; if the employee has no assignment to O&M=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 89

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Assignment Allocation to Professional Development

Short Name: ASGPRDEV

Definition: The percentage of effort assigned to professional development. Professional development activities are those performed by individuals that are related to individual and organizational enrichment (e.g., sabbatical, conference, short courses, additional degree related course work). If the employee is assigned 100 percent of time to professional development=100; if the employee has no assignment to professional development=0.

The total allocation to function including instruction, research, public service, academic support, student services, institutional support, organization and maintenance of plant, auxiliary enterprise, hospitals, and professional development should not exceed 100 percent for each staff member.

Element Length: 3 **Element Type**: N **Sequence Number**: 90

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Number

Short Name: COURSENU

Definition: The institutionally defined number that uniquely identifies each course an employee teaches.

Element Length: – **Element Type**: N **Sequence Number**: 91

Codes: Not applicable

Source of Definition: Institution

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Section Number

Short Name: SECTNUM

Definition: The institutionally defined number that uniquely identifies each section of a course number that an employee teaches.

Element Length: – **Element Type**: N **Sequence Number**: 92

Codes: Not applicable

Source of Definition: Institution

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Level

Short Name: COURSLEV

Definition: The level of the course (for credit or noncredit) an employee teaches *if* the course number does not already indicate the level. For example, a master's level graduate course=4.

Element Length: 1 **Element Type**: N **Sequence Number**: 93

Codes:

1	Remedial course level
2	Lower division undergraduate
3	Upper division undergraduate
4	Master's
5	First-professional level graduate
6	Doctoral level graduate

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Credit Hours

Short Name: COUCRHRS

Definition: The number of credit hours awarded for a course for each of the courses an employee teaches. For example, if a course is three credit hours=03. To be used by institutions that use credit hours, not clock hours.

Element Length: 2 **Element Type**: N **Sequence Number**: 94

Codes: Not applicable

Source of Definition: *A Common Language for Postsecondary Accreditation: Categories and Definitions for Data Collection*, NCHEMS, 1985

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Clock Hours

Short Name: COURCLKH

Definition: The number of clock hours awarded for a course for each of the courses an employee teaches. For example, if a course is 600 clock hours in total length=600. For use by institutions that utilize clock hours, not credit hours.

Element Length: 4 **Element Type**: N **Sequence Number**: 95

Codes: Not applicable

Source of Definition: *A Common Language for Postsecondary Accreditation: Categories and Definitions for Data Collection*, NCHEMS, 1985

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Contact Hours

Short Name: COURCONT

Definition: The total hours of scheduled instructional activity spent by instructional faculty in a specified time period. For example, if a course meets three hours per week for 15 weeks, it yields 45 contact hours.

Element Length: 4 **Element Type**: N **Sequence Number**: 96

Codes: Not applicable

Source of Definition: *A Common Language for Postsecondary Accreditation: Categories and Definitions for Data Collection*, NCHEMS, 1985

Use of Data: To calculate workload

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Course Type/Format

Short Name: COURTYPE

Definition: A code to represent the type of instructional activity utilized for each course.

Element Length: 2 **Element Type**: N **Sequence Number**: 97

Codes:

1	Lecture
2	Seminar
3	Discussion group
4	Lab, clinic
5	Field work experience
6	Workshop
7	TV, radio, or other distance media
8	Group projects
9	Applied or experiential learning
10	Independent study
11	Internship
12	Recital
13	Other

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Instructional Record Status

Short Name: INSTRREC

Definition: A code which indicates if the employee is the instructor of record for each course.

Element Length: 1 **Element Type**: N **Sequence Number**: 98

Codes:
1 Yes
2 No

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Responsibility Share

Short Name: RESPSHAR

Definition: The proportion of a course for which the employee is assigned responsibility. If the employee is assigned sole responsibility for the course, the entry is 100. If the course is team-taught and two employees share responsibility equally, the entry for each employee=50.

Element Length: 3 **Element Type**: N **Sequence Number**: 99

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To distribute student credit hour production among employees sharing responsibility for a course.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Enrollees

Short Name: ENROLLES

Definition: The number of students who are enrolled in a given course number and section through the institutional registration processes.

Element Length: 3 **Element Type**: N **Sequence Number**: 100

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Undergraduate Advisees

Short Name: UGADVNU

Definition: The number of undergraduate students for whom the employee serves as the academic advisor during a given term. For example, if an employee has 15 undergraduate students as advisees, the entry=015.

Element Length: 3 **Element Type**: N **Sequence Number**: 101

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Baccalaureate Level Thesis Committee Assignments

Name: BACOMASG

Definition: The number of thesis committees (baccalaureate level) an employee serves on as a committee member (not major advisor or major professor) during a given term. For example, if an employee serves on 12 baccalaureate level thesis committees, the entry=12.

Element Length: 2 **Element Type**: N **Sequence Number**: 102

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Master's Level Thesis Committee Assignments

Name: MACOMASG

Definition: The number of thesis committees (master's level) an employee serves on as a committee member (not major advisor or major professor) during a given term. For example, if an employee serves on 12 master's level thesis committees, the entry=12.

Element Length: 2 **Element Type**: N **Sequence Number**: 103

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Dissertation Committee Assignments

Short Name: PHCOMASG

Definition: The number of dissertation committees (doctoral level) an employee serves on as a committee member (not major advisor or major professor) during a given term. For example, if an employee serves on 12 dissertation committees the entry=12.

Element Length: 2 **Element Type**: N **Sequence Number**: 104

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Baccalaureate Level Theses Supervised

Short Name: BACTHESN

Definition: The number of thesis (baccalaureate level) students an employee serves as major advisor or major professor during a given term. For example, if an employee has eight students assigned the entry=08.

Element Length: 2 **Element Type:** N **Sequence Number:** 105

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Master's Level Theses Supervised

Short Name: MASTHESN

Definition: The number of thesis (master's level) students an employee serves as major advisor or major professor during a given term. For example, if an employee has eight students assigned the entry=08.

Element Length: 2 **Element Type**: N **Sequence Number**: 106

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Doctoral Level Dissertations Supervised

Short Name: DISSADNU

Definition: The number of dissertation (doctoral level) students an employee serves as major advisor or major professor during a given term. For example, if an employee has six students assigned the entry=06.

Element Length: 2 **Element Type**: N **Sequence Number**: 107

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Internships Supervised

Short Name: INTERNU

Definition: The number of students with internships an employee supervises during a given term. For example, if an employee is supervising six students, the entry=06.

Element Length: 2 **Element Type:** N **Sequence Number:** 108

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: Used to calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of New Courses Developed or Innovative Teaching Materials Prepared

Short Name: NEWMATNU

Definition: The number of new courses or innovative teaching materials an employee develops or prepares during a given term. For example, if an employee develops two new courses, the entry=02.

Element Length: 2 **Element Type:** N **Sequence Number:** 109

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Other Workload Assignments

Short Name: OTHRASSN

Definition: Other workload assignments as determined by the institution for an employee during a given term.

Element Length: – **Element Type**: N **Sequence Number**: 110

Codes: Institutionally defined

Source of Definition: Institution

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Outputs

1. Credit hour production
2. Number of baccalaureate level thesis students completing this term
3. Number of master's level thesis students completing this term
4. Number of dissertation students completing this term
5. Performance evaluation rating
6. Student evaluation rating
7. Type of publications/presentations
8. Number of publications
9. Number of research grants funded
10. Dollar amount of research grants funded
11. Type of accomplishments/recognitions
12. Number of accomplishments/recognitions

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Credit Hour Production

Short Name: CRHRPROD

Definition: A calculation which represents the number of credit hours each employee produces during a given term. Calculated as the sum of the number of course credits multiplied by course enrollment for each course taught.

Element Length: 3 **Element Type**: N **Sequence Number**: 111

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Baccalaureate Level Thesis Students Completing This Term

Short Name: BATHFIN

Definition: The number of thesis students (baccalaureate level) under the employee's supervision who completed during this term. For example, if two students completed the program, the entry=02.

Element Length: 2 **Element Type**: N **Sequence Number**: 112

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Master's Level Thesis Students Completing This Term

Short Name: MATHFIN

Definition: The number of thesis students (master's level) under the employee's supervision who completed during this term. For example, if two students completed the program, the entry=02.

Element Length: 2 **Element Type**: N **Sequence Number**: 113

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Dissertation Students Completing This Term

Short Name: PHDISFIN

Definition: The number of dissertation students (doctoral level) under the employee's supervision who completed during this term. For example, if four students completed the program, the entry=04.

Element Length: 2 **Element Type**: N **Sequence Number**: 114

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Performance Evaluation Rating

Short Name: PERFEVAL

Definition: The employee's rating on an evaluation performed by supervisor. In absence of an institutional rating scale, the following may be utilized.

Element Length: 1 **Element Type**: N **Sequence Number**: 115

Codes:

1	Unacceptable rating
2	Needs improvement rating
3	Average rating
4	Good rating
5	Excellent, outstanding rating

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Student Evaluation Rating

Short Name: STUDEVAL

Definition: The summary of student evaluations, if appropriate. Determined by institution.

Element Length: – **Element Type**: N **Sequence Number**: 116

Codes: Institutionally defined

Source of Definition: Institution

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Publications/Presentations

Short Name: PUBSTYP

Definition: The type of items considered to be scholarly work accepted for publication during a given term. For example, if an employee has one article published in a refereed professional or trade journal during a specific term, the entry=01.

Element Length: 2 **Element Type**: N **Sequence Number**: 117

Codes:

1 Articles published in refereed professional or trade journals
2 Articles published in nonrefereed professional or trade journals
3 Creative works published in juried media
4 Creative works published in nonjuried media or in-house newsletters
5 Published reviews of books, articles, or creative works
6 Chapters in edited volumes
7 Textbooks
8 Other books
9 Monographs
10 Research or technical reports disseminated internally or to clients
11 Presentations at conferences, workshops, etc.
12 Exhibitions or performances in the fine or applied arts
13 Patents or copyrights (excluding thesis or dissertation)
14 Computer software products

Source of Definition: National Study of Postsecondary Faculty (NSOPF), NCES

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Publications

Short Name: PUBNUM

Definition: The number of items considered to be scholarly work accepted for publication during a given term. For example, eight publications=08. Count multiple presentations/publications of the same work only once.

Element Length: 2 **Element Type**: N **Sequence Number**: 118

Codes: Not applicable

Source of Definition: National Study of Postsecondary Faculty (NSOPF), NCES

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Research Grants Funded

Short Name: GRANTNU

Definition: The number of research grants an employee is awarded from external sources during a given term. For example, if an employee receives two research grants, the entry=02.

Element Length: 2 **Element Type:** N **Sequence Number:** 119

Codes: Not applicable

Source of Definition: NCHEMS

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Dollar Amount of Research Grants Funded

Short Name: GRANTAMT

Definition: The total dollar amount of research grants from external sources that an employee is awarded during a given term.

Element Length: 8 **Element Type:** N **Sequence Number:** 120

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To calculate workload.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Accomplishments/Recognitions

Short Name: ACCRECTY

Definition: The type of accomplishments and/or recognitions an employee might receive. For example, if an employee receives a special recognition from his/her professional association, the entry=01.

Element Length: 2 **Element Type**: N **Sequence Number**: 121

Codes:

01	Recognition - professional association/organization
02	Recognition - institution
03	Recognition - other
04	Grant - in field/discipline
05	Grant - out of field/discipline
06	Distinguished/Named Professor
07	Elected officer of professional association
08	Appointed officer of professional association
09	Serve as editor/associate editor for journal
10	Serve as manuscript reviewer for journal
11	Other

Source of Definition: NCHEMS

Use of Data: To describe productivity.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Number of Accomplishments/Recognitions

Short Name: ACCRECNU

Definition: The number of items an employee receives during a given term considered as accomplishments and/or recognition. For example, six special recognitions=06. This element is to be used with type of accomplishments/recognitions.

Element Length: 2 **Element Type**: N **Sequence Number**: 122

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To describe productivity.

Separation

1. Date of separation
2. Type of separation
3. Type of subsequent employer
4. Subsequent position
5. Subsequent salary

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Date of Separation

Short Name: DTSEPAR

Definition: The month, day, and year that the employee's employment ended with your institution. An 8-digit code of the form YYYYMMDD. For example, September 30, 1989=19890930.

Element Length: 8 **Element Type**: N **Sequence Number**: 123

Codes: Not applicable

Source of Definition: NCHEMS

Use of Data: To identify the last date of employment. Necessary for state and federal reporting and internal analyses.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Separation

Short Name: TYPESEP

Definition: The employee's type of separation upon leaving the institution.

Element Length: 1 **Element Type**: N **Sequence Number**: 124

Codes:

1	Voluntary resignation
2	Involuntary separation - unacceptable performance
3	Involuntary separation - reduction in force (RIF)
4	Involuntary separation - program elimination
5	Retirement
6	Death
7	Disability

Source of Definition: NCHEMS

Use of Data: Can be used for trend analyses.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Type of Subsequent Employer

Short Name: SUBEMPER

Definition: The type of subsequent employer an employee has after leaving the institution, if relevant and known.

Element Length: 1 **Element Type**: N **Sequence Number**: 125

Codes:

1	4-year college or university, graduate, or professional school
2	2-year or other postsecondary institution
3	Elementary or secondary school
4	Consulting, freelance work, self-owned business, or private practice
5	Hospital or other health care or clinical setting
6	Foundation or other nonprofit organization other than health care organization
7	For-profit business or industry in the private sector
8	Federal government, including military, or state or local government
9	Other

Source of Definition: National Study of Postsecondary Faculty (NSOPF), NCES

Use of Data: To ascertain institutional competitiveness.

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Subsequent Position

Short Name: SUBPOS

Definition: The position an employee obtains at a subsequent employer, if relevant and known. See appendix A for definitions and descriptions.

Element Length: 1 **Element Type**: N **Sequence Number**: 126

Codes:

1	Executive/administrative/managerial professional
2	Instruction/research professional
3	Specialist/support professional
4	Technical employee
5	Office/clerical employee
6	Crafts/trades employee
7	Service employee
8	Other

Source of Definition: Equal Employment Opportunity Commission (EEOC)

HUMAN ASSET DATA ELEMENT DICTIONARY

Element Title: Subsequent Salary

Short Name: SUBSAL

Definition: The salary of the employee at the subsequent employer. If the salary is not known, enter "999999."

Element Length: 6 **Element Type**: N **Sequence Number**: 127

Codes: Not applicable

Source of Definition: NCHEMS

Chapter IV Calculating and Reporting Conventions

The previous chapters identify data elements needed to describe an institution's human assets and recommend definitions, subcategories, and coding schemes for those elements. **But data elements by themselves are of little use; only when they are organized, manipulated, and presented comprehensibly do they acquire meaning.** This chapter suggests ways to convert the identified data elements into information that can undergird the critical discussions and decisions about human assets that all postsecondary institutions face.

With a database as extensive as that described, the analytic possibilities are enormous and impossible to list. This chapter pursues the much more modest objective of illustrating "good practices" with regard to some common or particularly important uses of these data. The illustrations fall into two major categories:

Analyses to support strategic planning and management, including:

- Characteristics of employees and how they have changed over time;
- Amount of human asset available for assignment;
- Price/cost considerations;
- Allocation/use of the available asset;
- Workload and productivity;
- Student experience (describing allocation/use from the client perspective); and
- Renewal of the asset.

Data exchange and reporting to external agencies, including:

- Demographic characteristics of employees;
- Average salaries;
- Salaries of newly hired employees;
- Amount of human assets of various types available for allocation; and
- Allocation of human assets to the various institutional functions.

It is hoped not only that these illustrations will guide analysts charged with developing information but that the chosen methodologies and formats will emerge as conventional ways of presenting data concerning such commonly used–and widely misunderstood–terms as "allocation," "workload," and "productivity."

Strategic Analyses

Many strategic planning and management decisions regarding human assets involve issues of creating and shaping those assets, using them effectively, and maintaining them. Such decisions require an ongoing capacity to monitor conditions and practices of the institution along a variety of critical dimensions. This section suggests how to organize the data and calculate values for some of the most important factors.

Because no absolute standards establish what values are appropriate, it is necessary to choose something to compare the calculated values against. One way is to compare an institution's performance with its own past performance. This requires that trend data be calculated and displayed, minimally covering a period of five years. The other way is to compare institutional conditions and practices with those of peer institutions.

Many of the most meaningful analyses involve linking data from the human asset files and other files–finance, student outcomes, registration, student records, and so forth. Listing all of the potential elements that might be linked is beyond the scope of this document. It is important, however, to remember that those other sources of data exist and to construct data files so that the linkages are straightforward. It is particularly important to specify linking elements–functions, organizational units, courses, individuals–in exactly the same way in each data file.

The balance of this section gives examples of analyses and information displays considered basic to institutional decisionmaking.

Important Characteristics of the Institution's Employees

For internal management purposes, it is useful to get an overview of the characteristics of the *individuals* who make up the institution's workforce, and a sense of how the mix has changed over the past five to 10 years. Among the major dimensions to monitor are gender, race/ethnicity, age, academic preparation, and years of service to the institution. It is appropriate to develop separate measures for full-time employees, part-time employees, and student employees. For student employees the gender and race/ethnicity variables are important, while measures of age and academic preparation (except for the distinction between graduate and undergraduate student employees) are seldom relevant.

Useful measures, therefore, are typically those described below:

1. Gender and race/ethnicity - Proportion of employees who are women and minorities for:

    - The full-time, part-time, and student employees in each human asset category/subcategory
    - Tenured instruction/research professionals (by rank)

2. Age - In addition to ascertaining proportions within each grouping, one must look at data on numbers of employees in order to identify shifts within and between the various groupings. Proportion of full-time and part-time employees in each human asset category who are:

   - 65 years of age or older
   - 55-64
   - 45-54
   - 35-44
   - 25-34
   - Less than 25

   These age categories are consistent with those used by the Census Bureau, but institutions are encouraged to use whatever categories serve their purposes.

3. Academic Preparation - Proportion of full-time and part-time employees in each human asset category who have as their highest degrees:

   - Doctoral degrees
   - First-professional degrees
   - Master's degrees
   - Baccalaureate degrees
   - Associate degrees
   - High school diplomas/GEDs

4. Years of Service - Number and/or proportion of full-time employees in each category who have served the institution for:

   - 30 or more years
   - 20-29 years
   - 10-19 years
   - 6-9 years
   - 1-5 years
   - Less than 1 year

   Years of service can be calculated by subtracting the first year of employment from the current year. The intervals listed above should be adjusted to reflect specific institutional need, such as terms of employment that provide for vesting in a retirement plan after "x" years of service, or eligibility for retirement after "y" years of service.

Amount of Human Asset Available to the Institution

In addition to tracking the makeup of the workforce, it is necessary to monitor regularly the amount of human asset it represents. As described in chapter 1, the amount of human asset available to an institution can be expressed in either full-time equivalents or service months. In developing indicators, it is appropriate to present trend data for each of the human asset categories, and investigate separately the changes over time for full-time employees, part-time employees, and student employees.

In addition to the overall measures, it is useful to find out:

1. What proportion of the total service months available is provided by employees in each human asset category.

2. What proportion of the total service months available in each human asset category is provided by women and minorities.

3. What proportion of the total service months available in each human asset category is provided by persons who are:

   - 65 years of age or older
   - 55-64
   - 45-54
   - 35-44
   - 25-34
   - Less than 25

   To simplify, the proportion of service months in each category may be provided by individuals older than some specified age (55 or 60, for example).

Allocation/Use of the Available Human Assets

Issues in this area concern allocation of human assets to institutional functions, trends in the allocation, trends in the amount of asset (full-time, part-time, student) being allocated to various functions, and comparison of allocation to actual use. The basic format is that described in figure 11.

Using the basic format, it is appropriate to:

- Calculate the number of full-time, part-time, and student employees (i.e., complete figure 11 for each of these three groups independently) and from those data determine proportion of full-time employees.

Figure 11
Allocation/Use of Asset

Functional Category	Exec/Admin Mgr	Inst/ Research	Spec/ Support	Technical	Office/ Clerical	Crafts/ Trades	Service
Instruction							
Research							
Public Service							
Academic Support							
Student Services							
Instl. Support			Entries are FTEs or, preferably, service months				
O&M of Plant							
Professional Dev.							
TOTAL							

- Compare *allocations* with actual use figures. To reiterate, allocation data are prospective–done at the beginning of the year (they represent the human asset *budget* for the institution); actual use data are retrospective and are compiled at the end of the year (they represent the human asset *expenditure* for the institution). Periodically comparing allocation with utilization allows checking reliability of the allocation process.

- Develop measures of:
  - The proportion allocated to academic (instruction, research, service) functions as opposed to nonacademic functions;
  - The proportion of instruction/research professionals distributed to each of the three academic functions of the institution; and
  - The proportion of the service months in each human asset category devoted to professional development.

  Suggestions of how to generate these data are provided in appendix C.

Workload and Productivity

The terms "workload" and "productivity" are at the heart of much controversy concerning postsecondary education, but they are ill-defined and loosely used. In this document, the following definitions apply:

> Effort: The amount of time (measured in service months) devoted to a particular function. Particularly when applied to an individual, effort can be expressed as the proportion of the full-time effort being devoted to each function (for example, half-time teaching or half-time research).

Workload: Workload is a measure of "activity." The sum of the discrete measures of responsibility assigned or the sum of the tasks to be accomplished. For example, "x" classes taught, "y" thesis students advised, and "z" research projects directed.

Outputs: The consequences or products resulting from the tasks performed.

Productivity: Outputs produced per unit of effort (e.g., service month).

Issues of workload, output, and productivity are extremely complex. Whether the unit of analysis is the group (e.g., the department) or the individual, workload consists of several components, and the work typically results in more than one kind of output. The means of measurement are poor, and in many cases, the best available measures are indirect rather than direct. Moreover, the measures cannot be added together: classes taught and research projects directed cannot be combined without some sort of equivalency table, a device which itself will be subject to dispute.

Nevertheless, these issues rouse considerable interest, particularly among those outside the institution with regard to the productivity of instruction/research professionals relative to outputs of the three "academic" programs (instruction, research, public service). To deal with important external audiences, a simplified set of "conventional" measures is proposed:

1. Level of Effort (This measure was discussed in the context of allocation/use of the human asset.)

2. Workload
   a. Instruction
      - Number of faculty contact hours of classroom instruction by course level (remedial, lower division, upper division, graduate, master's, doctoral)
      - Number of student credit hours taught (measured at time of "census date" early in the term) by course level (remedial, lower division, upper division, master's, doctoral)
      - Number of thesis/dissertation advisees (undergraduate, master's, doctoral)
      - Number of undergraduate advisees
      - Number of contact hours of independent study
      - Number of new courses developed or innovative teaching materials prepared
   b. Research - There are no widely accepted measures of research workload. The following are suggested as useful possibilities:
      - Number of research projects
      - Dollar volume of research activity
      - Number of research students supervised

c. Public Service - Similarly, there are no widely accepted measures of public service workload. The following are possibilities:
   - Dollar volume of public service activity
   - Number of discrete public service activities or number of separate projects requiring the production of a report or other project

3. Outputs - The term "outputs," rather than outcomes, is used purposely in this context. In a perfect world, it would be possible to relate the level of skills and knowledge acquired by students and the value of the new knowledge created–outcomes–to the effort expended on the various functions. Because this is not a perfect world, we are left with substitute measures that are, at best, conventional proxies for the core concepts at issue.
   a. Instructional Outputs
      - Student credit hours produced (successfully completed) at the lower division, upper division, and graduate levels. These data may be separated according to student credit hours produced by full-time, part-time, and student employees.
      - Other measures of instructional outputs can be developed, such as number of degrees granted or numbers of students placed in occupations for which they have been trained, but they are not recommended for inclusion in a human asset database.
   b. Research/Scholarship Outputs
      - Number and dollar amount of research grants funded
      - Number of books and refereed journal articles accepted for publication
      - Number of art works accepted for juried shows, appearances as guest performers
      - Proportion of instruction/research professionals devoting effort to research/scholarship activities
   c. Public Service Outputs - There are no commonly accepted measures of public service outputs. One measure is client contact hours (number of individuals served multiplied by hours of service) provided through public service activities. Additional measures might be number or proportion of instruction/research professionals devoting effort to public service activities or number of "peer-reviewable" reports generated as part of a public service activity.

4. Productivity - Productivity is typically defined as unit of output per unit of input. Thus, measures of productivity for academic functions might be:
   a. Instruction
      - Student credit hours produced per instructional service month, by level of instruction (lower division, upper division, graduate). Additional insights can often be gained if this calculation is performed separately for full-time, part-time, and student instruction/research professional employees.

- Graduate degrees produced per instructional service month of graduate level instruction.

b. Research
   - Number of research grants and dollar amount of research grants received per research service month
   - Number of books and refereed journal articles accepted for publication per research service month
   - Proportion of full-time instruction/research professionals having research/scholarship assignments
   - Proportion of full-time instruction/research professionals with research/scholarship assignments receiving new grants during the course of the year for which they will serve as the principal investigator or the co-principal investigator
   - Proportion of full-time instruction/research professionals with research/scholarship assignments having a book or refereed journal article accepted for publication during the course of the year
   - Proportion of full-time instruction/research professionals with scholarship/creative work assignments having a creative work accepted in a juried show or performing as a guest artist during the course of the year

c. Public Service
   - Client contact hours of public service per service month of effort devoted to the public service function
   - Proportion of full-time instruction/research professionals having public service assignments
   - Number of peer-reviewable reports produced per service month of public service effort

5. Additional Points - Within the institution, it may be appropriate to analyze quite different components of the conceptual framework (for example, to pay attention to workload and productivity of trades or other types of employees engaged in operations and maintenance of the plant or of specialist/support professionals engaged in institutional support functions). The same concepts apply with one major difference. In most cases, the workload measures are more appropriately gathered for a *group* of employees and therefore not added into the records of any of the employees. For example, one measure of workload for custodians is the number of square feet of buildings they keep clean. It is more appropriate to maintain data on square feet of buildings separately so that the aggregate number can be divided by the effort (service months, FTE) of custodial employees. The costs of inserting separate workload measures for each custodian into the database would outweigh the benefits attained.

The same argument applies to many other kinds of employees. To the extent that other employees engage in the same activities as instructors/research

professionals (e.g., advising students), the workload measures suggested should be included in their records as well.

Here again, it is appropriate to develop separate measures of workload, output, and productivity for full-time, part-time, and student employees. It is particularly important to include the contributions of student employees in analyzing the workload and productivity of the instruction function.

Greatest utility will result from developing these data at either the department or college level. Except for personnel decisions affecting the individual employee, workload and productivity data focused on the individual employee is too detailed. For internal purposes, workload and productivity measures at the institutional level are so aggregate as to mask variation of importance to institutional managers.

Measures of Student Experience–the Client Perspective

Measures of effort, workload, and productivity focus on institutions as *providers* of education. Increasingly, however, legislators and other funders of higher education refer to the *clients'* perspective on the enterprise. Most measures of this type–those dealing with student satisfaction, access to courses, and so on–must be obtained through data held in other data sets. Some measures, however, can be derived directly from data recommended for inclusion in a human asset database. These measures include:

1. Proportion of lower division student credit hours taught by full-time employees, part-time employees, and student employees.

2. Proportion of full-time instruction/research professionals who teach no lower division courses, one lower division course, and two or more lower division courses.

3. Proportion of full-time instruction/research professionals who have no undergraduate student advisees.

What proportion of full-time instruction/research professionals should teach undergraduate classes, and what proportion of lower division credit hours should they teach? There is no right answer, but very low numbers should raise red flags and trigger a review of assignment policies.

Price/Cost Considerations

Numerous financial considerations arise with the hiring and continued employment of an institution's workforce. Among the measures of particular interest are trends in salaries being paid to new employees, costs of start-up packages, average salaries/wages for all employees, cost per

service month, and liabilities associated with accumulated leave. Specific suggestions of what to monitor are as follows:

1. Acquisition Costs
   a. Salaries of new full-time employees. Trend data should be developed for each human asset category/subcategory using the following data:
      - Number of new hires in each category/subcategory during a specified period of time
      - Highest salary/wage paid in each category/subcategory
      - Lowest salary/wage paid in each category/subcategory
      - Average salary/wage paid in each category/subcategory
   b. Start-up packages. The total dollar value of the start-up packages offered can be divided by the number of new hires to whom start-up packages were provided. (This category typically applies only to instruction/research professionals and selected executive/administrative/managerial professionals.)

2. Average Salaries/Wages - Average salaries/wages for full-time employees in each human asset category/subcategory. The calculation of average salaries/wages is based on the nominal or contract rate of pay and *not* on amounts individuals actually earn. However, for salary equity analyses, it would be useful to calculate average salaries both with and without overtime, extra duties stipend, and so on.
   - Calculated as the sum of the salaries divided by the sum of the months in the contract or appointment periods for exempt employees.
   - Expressed as the average wage per hour for full-time employees in each category, or annualized by multiplying wage per hour times the number of hours per year used as the institutional norm or standard for nonexempt employees.

   The above calculations are most useful if performed by gender, ethnicity, college/department, and human asset category/subcategory.

3. Cost Per Service Month
   a. Average salary/wage expenditure per service month in each category/ subcategory calculated as the sum of annual expenditures on salaries or wages in each category/subcategory divided by the total number of service months in the respective category/subcategory.
   b. Average total compensation expenditures per service month in each category/subcategory. An alternative is to calculate average costs for benefits (total compensation expenditures less total salary and wages expenditures).

4. Leave Liability - For many institutions, the financial liability associated with accumulated leaves of employees is a liability that gets very little attention, yet could

have serious consequences in the event that employees exercised their rights to draw on these benefits. In recognition of this fact, it is suggested that:

- For full-time employees in each human asset category, the value of accumulated leave be calculated. This value is the sum of the cost of leaves (hours or days of leave multiplied by the hourly or daily wage/salary rate) for all employees in each category.
- For some purposes it will be appropriate to calculate leave liability separately for each type of leave.
- It will be appropriate to calculate this value annually for those employees 65 years of age or older (or otherwise defined as being eligible for retirement–e.g., have 30 years of service at the institution) since these employees are the most likely to claim these benefits.

Renewal of the Human Asset

As noted earlier, institutions frequently neglect to focus on renewal of their human assets. Some of the indicators relative to accomplishing this task were described at the beginning of this chapter in the section dealing with demographic characteristics of the institution's employees. Additional indicators that may be useful in this regard are described below.

1. Turnover Rate - The number of individuals separating from the institution (for all reasons) during the course of the year divided by the total number of employees at the beginning of the year, by:
   - full-time/part-time
   - human asset category/subcategory
   - gender
   - ethnicity

2. Replacement Rate - The number of individuals hired by the institution during the year divided by the total number of employees at the end of the year, by:
   - full-time/part-time
   - human asset category/subcategory
   - gender
   - ethnicity

3. Reinvestment Rate - The number of service months allocated to professional development divided by total number of service months or the dollar level invested in the professional development of employees by:
   - full-time/part-time
   - human asset category/subcategory

4. Promotion Rates
   a. Number of employees promoted to a higher position during the course of the year divided by the number of employees in the original (lower) position at the beginning of the year, by:
      - rank (for instruction/research professionals)
      - initial position
      - gender
      - ethnicity

   b. Number of full-time instruction/research professionals awarded tenure divided by number of individuals considered for tenure during the course of the year, by:
      - gender
      - ethnicity
      - college/department
      - years of service

5. Tenure Rate - Number of full-time instruction/research professionals that are tenured divided by the total number of full-time instruction/research professionals, by:
   - rank
   - gender
   - ethnicity
   - college/department

6. Outmigration Rate - Number of full-time employees that leave the organization voluntarily and accept subsequent employment elsewhere divided by total full-time employees, by:
   - human asset category/subcategory
   - category of subsequent employees
   - gender
   - ethnicity

Data Exchange and Reporting

As noted at the beginning of this chapter, institutions sometimes find it useful to obtain data from a set of comparison institutions for internal "benchmarking" purposes. Those data can be extremely varied. In addition, institutions must report basic human asset data to agencies of state and federal government. The data commonly reported to government agencies are much more limited and are encompassed by the formats presented in the balance of this section.

Regardless of whether the application is for interinstitutional exchange or external reporting, the following advice is offered:

- **Use the "standard" data element definitions recommended in this document**. Almost all institutions will have unique practices and definitions. Data quality will improve and data will be easier to exchange if institutions begin to use a common standard.

- **Collect data at the institutional level**. Because structures vary enormously, reporting or exchanging data at the sub-institutional level (e.g., the college of arts and sciences, the division of student affairs) should be attempted only after considerable attention is given to which departments/functions are included under a given label.

Demographic Characteristics of Employees

Headcount data by gender and by race/ethnicity should be provided separately for full-time employees and part-time employees (see figure 12). It is suggested that these data not be provided for student employees.

Figure 12
Demographic Characteristics

Human Asset Category	Female by Race/Ethnicity	Male by Race/Ethnicity	Total by Race/Ethnicity
Executive/Admin/Mgr Instruction/Research Specialist/Support Technical Clerical Crafts & Trades Service TOTAL	Entries are employee headcounts		

Average Salaries–Full-Time Instruction/Research Professionals

Headcount and salary data by gender, by race/ethnicity, and by discipline should be provided for full-time instruction/research professionals (see figure 13). Data should be displayed separately for individuals on 9-month contracts and 11/12-month contracts. For some interinstitutional exchange purposes, it may be useful to add "years in rank" as a fourth variable under each rank.

Figure 13
Average Salaries

	Headcount (1)	Sum of Salaries (2)	Average Salaries (3)
Professor			
Gender			
Race/Ethnicity			
Discipline			
Associate Professor			
Gender	Entries in column 1 should be headcounts. Entries in column 2 should reflect the sum of base salaries for the individuals counted in column 1. Entries in column 3 will be calculated as follows: column 2÷column 1.		
Race/Ethnicity			
Discipline			
Assistant Professor			
Gender			
Race/Ethnicity			
Discipline			
Instructor			
Gender			
Race/Ethnicity			
Discipline			
No Academic Rank			
Gender			
Race/Ethnicity			
Discipline			

Since employees in most of the other human asset categories are hired in a local market, as are almost all part-time employees, it is usually inappropriate to exchange/report such data on them. The exception might be senior-level executive/administrative/managerial professionals.

Salaries–Newly Hired Full-Time Instruction/Research Professionals

Salary data for newly hired full-time instruction/research professionals should be provided separately by gender, by race/ethnicity, and by discipline (see figure 14). Include data only for those individuals who have begun employment at the institution during the current academic or fiscal year or within the past six months. Data should be displayed separately for individuals on 9-month contracts and 11/12-month contracts.

Figure 14
Salaries - New Full-time Instruction/Research Professional Hires

New Hires	Number Hired (1)	Highest Salary (2)	Lowest Salary (3)	Average Salary (4)
Professor				
Gender				
Race/Ethnicity				
Discipline				
Associate Professor				
Gender				
Race/Ethnicity				
Discipline	Entries in column 1 should be headcounts. Entries in columns 2, 3, and 4 should reflect salaries as indicated.			
Assistant Professor				
Gender				
Race/Ethnicity				
Discipline				
Instructor				
Gender				
Race/Ethnicity				
Discipline				
No Academic Rank				
Gender				
Race/Ethnicity				
Discipline				
Total				
Gender				
Race/Ethnicity				
Discipline				

In many proprietary institutions, instructional personnel are paid on an hourly basis rather than being paid a monthly salary. In addition, they are generally not differentiated by rank. In such cases, the format in figure 15 is appropriate:

Figure 15
Hourly Wages - New Hires

	Number Hired (1)	Highest Hourly Wage (2)	Lowest Hourly Wage (3)	Average Hourly Wage (4)
No Academic Rank Gender Ethnicity	Entries in column 1 should be headcount. Entries in columns 2, 3, and 4 should reflect hourly wages as indicated.			

Amount of Human Asset Available for Allocation

Figure 16 uses the concept of "service months" to measure workforce assets. (Refer to chapter 1 for a detailed discussion.) A service month is equivalent to one individual working full-time for the period of one month. Service months are calculated by multiplying the percent of time worked (relative full-timeness) by the number of months of the individual's appointment.

Figure 16
Amount Available for Allocation

	Full-time		Part-time		Student		
Human Asset Category	Headcount (1)	Service Months (2)	Headcount (3)	Service Months (4)	Headcount (5)	Service Months (6)	Total Service Months (2)+(4)+(6)
Exec/Admin/Mgr Inst/Research Specialist/Support Technical Office/Clerical Crafts/Trades Service	Entries in columns 1, 3, and 5 should be headcount. Entries in columns 2, 4, and 6 should reflect service months.						

Allocation of Human Assets to Institutional Functions

Figure 17 presents the allocation of human assets to institutional functions. Entries should be service months. They can be either prospective (allocations) or retrospective (utilization).

Figure 17
Allocation of Asset by Function

	Exec/Admin Mgr	I/R Prof	Support Prof	Tech-nical	Office/ Clerical	Crafts & Trades	Service
Instruction							
Research							
Public Service							
Academic Support							
Student Services	Entries should be service months.						
Instl. Support							
O&M of Plant							
Auxiliary Enterprises							
Hospitals							
Professional Development							
TOTAL							

To provide for greater comparability, the amount of contracted services activity should be provided as explanatory information. In this regard, data should be provided on:

- Type of contractual services (organized by institutional function), and
- Dollar amount of the contract for the period in question.

Chapter V Glossary of Related Terms

Asset: Generally includes such items as cash, investments, pledges receivable, accounts receivable, notes receivable, inventories, prepaid expenses and deferred charges, institutional plant, and interfund borrowing due from or to other funds. Additionally, for the purpose of this handbook, the term also incorporates human assets.

Assignment: The work-related activity required to be accomplished by each employee. An assignment frequently encompasses a general activity, such as instruction, that can represent an array of activities (e.g., preparing class lectures, grading papers, advising students, or supervising graduate thesis or dissertation students).

Convention: A methodology established by common consent or customary usages. Of the alternative methodologies available, the one accepted for common use.

Course: The organization of subject matter and related learning experiences provided for the instruction of students on a regular or systematic basis, usually for a predetermined period of time (e.g., a semester or 2-week workshop).

Course Level: The level of offering for instructional courses at postsecondary education institutions. Course levels are assigned relative to the intended degree of complexity or expected level of student comprehension rather than by the student level of those enrolled in the course. The course levels typically include:

> **Remedial**: Course offerings at a level of comprehension usually associated with students deficient in the general competencies necessary for a regular postsecondary curriculum and educational setting.
>
> **Lower Division**: Course offerings at a level of comprehension usually associated with freshman and sophomore students.
>
> **Upper Division**: Course offerings at a level of comprehension usually associated with junior or senior students. Jointly offered upper division and graduate courses should be classified as upper division.
>
> **Graduate/Professional**: Course offerings at a level of comprehension usually associated with postbaccalaureate students. The two levels of graduate courses include master's and doctoral.

Course Section: The unique identifier for each course that is necessary to distinguish among multiple offerings of the same course.

Credit Course: A course that, if successfully completed, can be applied toward a degree, diploma, certificate, or other formal award.

Data: Either quantities (e.g., the number of employees, the average number of years of service to the institution) or codes (e.g., numbers that identify entity characteristics, such as the ethnicity, gender, or appointment type). Data result from observation or measurement. Data are raw facts from which information can be constructed. The quality of data is determined by their validity, accuracy, and reliability, all of which are properties related to measurement.

Decision Support System: The mechanism by which management data are transformed into information required for strategic decisionmaking.

Faculty: Employees whose specific assignments customarily are made for the purpose of conducting instruction, research, or public service as a principal activity (or activities), and who hold academic rank titles of professor, associate professor, assistant professor, instructor, lecturer, or the equivalent of any of these academic ranks.

Faculty Contact Hours: The total hours of scheduled instructional activity spent by instructional faculty as of a specified period of time. If a course meets three hours per week for 15 weeks, it yields 45 faculty contact hours. Similarly, if a course meets eight hours per day for two days, it yields 16 faculty contact hours. The contact hours for other instructional staff not holding faculty rank (such as lecturers and graduate teaching assistants) would be determined in the same manner.

Full-time Employee: Those individuals available for full-time assignment, at least for the period being reviewed or analyzed or those who are designated as "full-time" in an official contract, appointment, or agreement. Normally, those employees who work approximately 40 hours per week for the full year are considered full-time employees.

Full-time Equivalent (FTE): The equivalent of one employee who is deemed to be carrying a full load in accordance with an institutionally agreed-upon convention for converting numbers of specific employees to an equivalent number of full-time employees. For purposes of exchanging information about FTE workforce resources, the following method can be used to calculate comparable fiscal year FTE workforce resource data:

Step 1: Determine the total service months rendered by an individual over a fiscal year. For a given employee, multiply the percent workload (appointment percentage or relative full-time status) by the number of months of the individual's appointment for the fiscal year. For employees hired for a period of time that involves less than a month, multiply the percent workload by the applicable percentage of the month involved (for example, two weeks would generally be considered half or .50 of a month).

Step 2: Determine the total annual FTE workforce resources of all employees available during a fiscal year by totaling the service months calculated for all employees available during a fiscal year by totaling the service months calculated for all employees (in step 1) and dividing by 12.

Function: Refers to the employee's primary function with the institution. The NCHEMS *Program Classification Structure* identifies several categories that are helpful to identify various aspects to the operation of an institution: instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and professional development.

Headcount: A count of the number of individuals employed, without regard to period of employment or amount of time available.

Indicator: A concrete, policy-relevant piece of information about the conditions or results of postsecondary education that is regularly produced, reported, and used for purposes of strategic decisionmaking by policymakers.

Information: Consists of data that have been combined and given a form in which they convey to the user some useful knowledge. Information is created when data are selected, organized, and analytically manipulated, and the result is given a form that informs and serves the needs of users. The quality of information is determined by its relevance to the concerns of intended users, its timeliness, and its acceptability to users–all being properties that relate to users and the nature and context of use of information.

Management: The process of acquiring and combining an institution's human, financial, and physical resources to attain the primary goal of providing educational services.

Management Database: The set of data necessary to support strategic decisions. Some of the data incorporated in management databases are derived from operational databases; these are augmented, however, by many kinds of data originating outside the institution. The data in management databases typically are more aggregate and are updated less frequently than the data in operational databases.

Operational Information System: The means by which transactional data are processed to yield regular reports of predetermined content, to guide day-to-day operational decisionmaking (e.g., monthly workload reports, course enrollment information, payroll information).

Output: Represents the consequence or products resulting from the tasks performed.

Part-time Employee: Those individuals employed full-time for short periods of time (less than the period under review) as well as those not available to the institution for 100 percent assignment even though they may be employed for the full period.

Planning: A process by which decisions are made about the future direction of an enterprise (e.g., its mission, intended clientele, services to be rendered, programs to be offered, and areas of unique competence).

Productivity: Outputs produced per unit of effort. What is accomplished or produced as a result of the utilization of the available resource.

Service Month: A service month is defined as being equivalent to one individual working full-time for the period of one month. Service months are calculated by multiplying the percent workload (relative full-timeness) by the number of months of the individual's appointment.

Strategic Decisions: Those concerned with questions of institutional policy, purpose, or direction. They are at a level above operational or control decisions, made routinely in the course of running the institution. They concern programs rather than courses; tenure policy rather than whether a particular faculty member should be given tenure; long-range planning rather than deciding how to implement an innovation that has been approved and budgeted. Strategic decisions most often involve executive judgments, rather than the snap judgments made in dealing with the day-to-day flow of administrative tasks. They require information produced by a decision support system that incorporates a management database.

Tenure: The institutional designation that serves to identify the status of the employee with respect to permanence of appointed position. The following tenure designations indicate status of individuals:

> **Tenured**: Individuals who have been granted tenure. Tenure is a "holding" and in employment refers to the term or time that one will hold an appointment. Thus, one's tenure can be for a fixed or determinable term, or it can be indefinite.
>
> **Nontenured**: Individuals who are eligible for tenure (i.e., have tenure track positions) but have not been granted tenure.
>
> **Not eligible**: Individuals who are not eligible for tenure.

Utilization: Represents the human asset expenditure for the institution.

Workload: Represents the assignments or input aspects. It refers to the overall effort and the proportional distribution of that effort across institutional functions. Most assignments are expressed in terms of percentage of available time to be devoted to particular functions.

Appendix A

Human Asset Categories, Subcategories, and Detailed Definitions

The following human asset categories are from the Equal Employment Opportunity Commission (EEOC).

1.0 Executive/Administrative/Managerial Professionals

This classification includes employees who exercise primary responsibility for the management of the institution, or of a customarily recognized department or subdivision thereof, and who devote no more than 20 percent of their workweek to Fair Labor Standards Act (FLSA) nonexempt work. Assignments may require the performance of work directly related to management policies or general business operations of the institution or the performance of functions in the administration of a department or subdivision thereof directly related to academic instruction. This category conventionally will include employees with such job titles as president, chancellor, provost, vice president, controller, dean, director, assistant to the president, assistant dean, assistant director, coordinator. It may not include the head, chairman, or other administrative assignee within a department or similar unit unless such person is primarily an administrator exercising specific administrative authority while other activities are secondary. It is assumed that assignments in this category customarily and regularly require the incumbent to exercise discretion and independent judgment, and to direct the work of others.

Subcategories of the Executive/Administrative/Managerial Professionals category:

1.1 Assignment at this top level requires reporting either to the top executive officer or to the governing board for the operation of a system, or institution, or for a principal phase or portion of the institutional operation. Includes Presidents, Chancellors, Provosts, Vice Presidents, Vice Chancellors, and Vice Provosts.

1.2 Assignment requires the administration of a group of programs or a major operational unit, normally reporting to an officer holding a top executive appointment. Includes Deans and Directors.

1.3 Assignment requires the administration of an operational unit or program, or shares responsibility for a major unit with an administrator at a higher level. Includes Associate/Assistant Deans, Directors, and unit heads.

1.4 Assignment requires administrative support, above the clerical level, to a manager at a higher level, engages directly in specific administrative activities within a unit or subdivision, or has firstline supervisory responsibilities.

2.0 Instruction/Research Professionals

Employees in this classification customarily receive assignments for the purpose of instruction and/or research, with a combination of those activities being the most common situation. It must be borne in mind that these classifications derive from the institution's perception of the employee, but such perceptions are reflected most accurately in the assignments that the institution gives. Thus, a President or Vice President of the institution, or the Dean of a college, even though they may carry also the title of Professor, are not members of the Instruction/Research Professionals classification unless they normally spend 50 percent or more of their time in instruction and research activities. The term "faculty" is advisedly not used in a determining or definitive sense to describe this activity because that term has no universal or agreed-upon meaning for staff group coverage among institutions of postsecondary education. While the traditional faculty titles are used in the subcategories because they do make some contribution to understanding, they are used reluctantly. This reluctance derives from the knowledge that these terms, too, have lost universality of meaning if, indeed, they ever had it. These titles appear also in the main body of this handbook to contribute to the definitions. The following discussion permits classification of undesignated rank staff, researchers, visiting scholars, and so forth on a single scale.

2.1 Senior Instruction/Research - Assignment and classification at this top level implies a full level and scope of academic and scholarly responsibility and experience in the professional field. The institution expects leadership in some aspect(s) of academic and scholarly performance, such as curriculum development, excellence in teaching, development of knowledge, and other contributions to the academic field. Most commonly, assignment and classification at this level may be associated with such titles as professor and associate professor.

2.2 Junior Instruction/Research - Assignment and classification at this next level implies professional responsibility and experience at an entry or intermediate level, with a considerable latitude of independence in the performance of assignments, but with limitations on the freedom to select and structure those assignments. Most commonly, assignment and classification at this level may be associated with such titles as assistant professor and instructor.

2.3 Graduate Student - Assignment and classification at this level implies that personnel in this category perform with guidance from others exercising primary responsibility. The category typically is staffed by people with student status at the employing institution and may be associated with such titles as teaching associate, teaching assistant, teaching fellow, and so forth.

3.0 Specialist/Support Professionals

This category has a number of features in common with the previous two classifications of Executive/Administrative/Managerial Professionals and Instruction/Research Professionals. Persons in these three categories conventionally are drawn from the same or similar education, training, experience, and vocational backgrounds. Typically there is some intercategory mobility among these three categories, and all three (and only these three) are in the Fair Labor Standards Act (FLSA) exempt category. It is common for persons classified and assigned in this occupational category to have secondary or permanent occupational titles derived from the Instruction/Research Professionals category, or to be lumped with the previous two classifications in a group called "academic." This category includes persons given assignments requiring knowledge of an advanced type in a field of science or learning, or original and creative work in an artistic field, and no more than 20 percent of the workweek is devoted to FLSA nonexempt work. This category includes such employees as pathologists, pharmacists, attorneys, librarians, accountants, architects, systems analysts, psychologists, counselors, and so forth, employed for the primary purposes of performing or operating in the areas of academic support, student services, and institutional support, but excluding individuals who have executive or managerial (supervisory) responsibilities in these areas.

A useful set of subcategories in the classification may be derived from the educational qualifications conventionally required at different levels.

3.1 The advanced level assignment and classification would require that the incumbent normally would have attained a doctoral degree or equivalent.

3.2 The intermediate level assignment and classification would require that the incumbent normally would have attained a master's degree or equivalent.

3.3 The entry level assignment and classification would require that the incumbent normally would have attained a bachelor's degree or equivalent.

4.0 Technical Employees

This classification and assignment includes employees who exercise specialized knowledge and skills of the type that normally are acquired in postsecondary educational programs that do not lead to a bachelor's degree but do lead to a recognition of completion of a planned and sequential program. Such technical staff may be computer operators, dental assistants, photographers, draftsmen, position classification specialists, airplane pilots, practical nurses, occupational therapists, ornamental horticulturists, engineering technologists, and so forth. While these skills normally are acquired in formal postsecondary educational programs, incumbents may have acquired them through experience also.

Subcategories in this classification are indicated for institutional convenience only. Interinstitutional comparison and reporting by subdivisions in this classification does not seem warranted, given the state of the art of classification, because labor markets and characteristics are predominantly localized. Standard definitions may be developed in the future as demand indicates the need. For its own purposes the institution may distinguish:

4.1 Advanced classification and assignments

4.2 Intermediate classification and assignments

4.3 Entry classification and assignments

5.0 Office/Clerical Employees

This classification includes employees who perform clerical and secretarial duties in offices or other locations in which one customarily finds clerical staff such as offices, warehouses, motor pools, and laboratories. This includes secretaries, typists, bookkeepers, file clerks, inventory clerks, and so forth. Subcategories in this classification are indicated for institutional convenience only. Interinstitutional comparison and reporting by subdivisions in this classification does not seem warranted, given the state of the art of classification, because labor markets and characteristics and predominantly localized. Standard definitions may be developed in the future as demand indicates the need. For its own purposes the institution may distinguish:

5.1 Advanced classification and assignments

5.2 Intermediate classification and assignments

5.3 Entry classification and assignments

6.0 Crafts and Trades Employees

This classification includes employees who perform manually skilled activities in a craft or trade, including air conditioning installers, appliance repairmen, auto mechanics, carpenters, electricians, roofers, painters, plumbers, and so forth. Persons so employed may have derived their skills from trade or vocational schools, or may have served (or be serving) apprenticeships. Interinstitutional comparison and reporting by subdivisions in this classification does not seem warranted, given the present day state of the art of classification, because labor markets and characteristics are predominantly localized. This localization of conditions is particularly reflected in the regional variations in trade union activities and arrangements. For its own purposes the institution may distinguish:

6.1 Advanced classification and assignments. For some trades, this may correspond to the trade's own classification as "master."

6.2 Intermediate classification and assignments. This may correspond to the trade's own classification as "journeyman."

6.3 Entry classification and assignments. This may correspond to the trade's own classification as "apprentice."

7.0 Service Employees

This classification includes employees assigned to activities requiring only a limited amount of previously acquired skills and knowledge. It includes such employees as custodians, groundskeepers, security guards, food service workers, drivers, messengers, and so forth. It is true particularly with respect to this classification that interinstitutional comparisons or other reporting of anything but aggregate data from this category does not seem warranted. For the institution's own convenience, and for its own purposes, such as salary schedules, the institution may distinguish:

7.1 Advanced classification and assignments

7.2 Intermediate classification and assignments

7.3 Entry classification and assignments.

Appendix B

Crosswalk Between Standard Occupational Classifications and Human Asset Categories

Standard Occupational Classifications		Human Asset Categories	
121	General Managers and Other Top Executives	1.0	Executive/Administrative/Managerial
122	Financial Managers	1.0	Executive/Administrative/Managerial
123	Personnel and Industrial Relations Managers	1.0	Executive/Administrative/Managerial
124	Purchasing Managers	1.0	Executive/Administrative/Managerial
125	Managers: Marketing, Advertising, and Public Relations	1.0	Executive/Administrative/Managerial
126	Managers: Engineering, Mathematics, and Natural Sciences	1.0	Executive/Administrative/Managerial
127	Managers: Social Sciences and Related Fields	1.0	Executive/Administrative/Managerial
1281	Administrators: Colleges and Universities	1.0	Executive/Administrative/Managerial
141	Accountants, Auditors, and Other Financial Specialists	3.0	Specialist/Support
142	Management Analysts	3.0	Specialist/Support
143	Personnel, Training, and Labor Relations Specialists	3.0	Specialist/Support
144	Purchasing Agents and Buyers	3.0	Specialist/Support
145	Business and Promotion Agents	3.0	Specialist/Support
15	Architects	3.0	Specialist/Support
16	Engineers and Surveyors	3.0	Specialist/Support
17	Computer, Mathematical, and Operations Research Occupations	3.0	Specialist/Support
18	Natural Scientists	3.0	Specialist/Support
19	Social Scientists and Urban Planners	3.0	Specialist/Support
20	Social, Recreation, and Religious Workers	3.0	Specialist/Support
211	Lawyers	3.0	Specialist/Support
22	Teachers: Colleges and Universities (including junior colleges)	2.0	Instruction/Research
24	Vocational and Educational Counselors	3.0	Specialist/Support
25	Librarians, Archivists, and Curators	3.0	Specialist/Support
26	Physicians and Dentists	3.0	Specialist/Support
27	Veterinarians	3.0	Specialist/Support
28	Other Health Diagnosing and Treating Practitioners	3.0	Specialist/Support
29	Registered Nurses	3.0	Specialist/Support
30	Pharmacists, Dietitians, Therapists, and Physicians' Assistants	3.0	Specialist/Support

Standard Occupational Classifications		Human Asset Categories	
33	Editors, Reporters, Public Relations Specialists, and Announcers	3.0	Specialist/Support
36	Health Technologists and Technicians	4.0	Technical
37	Engineering and Related Technologists and Technicians	4.0	Technical
38	Science Technologists and Technicians	4.0	Technical
39	Technicians: Except Health, Engineering, and Science	4.0	Technical
45	Supervisors: Clerical Occupations	1.4	First-Line
461	Secretaries and Stenographers	5.0	Office/Clerical
462	Typists and Related Keyboard Operators	5.0	Office/Clerical
463	General Office Clerical Occupations	5.0	Office/Clerical
464	Information Clerks	5.0	Office/Clerical
465	Communications Equipment Operators	5.0	Office/Clerical
466	Correspondence Clerks and Order Clerks	5.0	Office/Clerical
468	Cashiers and Bank Tellers	5.0	Office/Clerical
469	Record Clerks	5.0	Office/Clerical
471	Bookkeepers, Billing, Accounting, and Statistical Clerks	5.0	Office/Clerical
472	Mail and Postal Clerks	5.0	Office/Clerical
473	Message Distribution Clerks	5.0	Office/Clerical
474	Material Recording, Scheduling, and Distributing Clerks	5.0	Office/Clerical
48	Computing and Office Equipment Operators	5.0	Office/Clerical
50	Supervisors: Service Occupations	1.4	First-Line Supervisors
51	Protective Service Occupations	7.0	Service
52	Service Occupations, Except Private Household and Protective	7.0	Service
552	Farm Managers	1.4	First-Line Supervisors
56	Other Agricultural and Related Occupations	7.0	Service
601	Supervisors: Construction	1.4	First-Line Supervisors
61	Construction Trades	6.0	Crafts and Trades
63	Supervisors: Transportation and Material Moving Occupations	1.4	First-Line Supervisors
64	Transportation Occupations	7.0	Service
65	Material Moving Occupations, Except Transportation	7.0	Service
66	Supervisors: Mechanics and Repairers	1.4	First-Line Supervisors
67	Mechanics and Repairers	4.0	Technical

Human Asset Categories		Standard Occupational Classifications	
1.0	Executive/Administrative/Managerial	121	General Managers and Other Top Executives
		122	Financial Managers
		123	Personnel and Industrial Relations Managers
		124	Purchasing Managers
		125	Managers: Marketing, Advertising, and Public Relations
		126	Managers: Engineering, Mathematics, and Natural Sciences
		127	Managers: Social Sciences and Related Fields
		1281	Administrators: Colleges and Universities
1.4	First-Line Supervisors	45	Supervisors: Clerical Occupations
		50	Supervisors: Service Occupations
		552	Farm Managers
		601	Supervisors: Construction
		63	Supervisors: Transportation and Material Moving Occupations
		66	Supervisors: Mechanics and Repairers
2.0	Instruction/Research	22	Teachers: Colleges and Universities (including junior colleges)
3.0	Specialist/Support	141	Accountants, Auditors, and Other Financial Specialists
		142	Management Analysts
		143	Personnel, Training, and Labor Relations Specialists
		144	Purchasing Agents and Buyers
		145	Business and Promotion Agents
		15	Architects
		16	Engineers and Surveyors
		17	Computer, Mathematical, and Operations Research Occupations
		18	Natural Scientists
		19	Social Scientists and Urban Planners
		20	Social, Recreation, and Religious Workers
		211	Lawyers
		24	Vocational and Educational Counselors

Standard Occupational Classifications		Human Asset Categories	
		25	Librarians, Archivists, and Curators
		26	Physicians and Dentists
		27	Veterinarians
		28	Other Health Diagnosing and Treating Practitioners
		29	Registered Nurses
		30	Pharmacists, Dietitians, Therapists, and Physicians' Assistants
		33	Editors, Reporters, Public Relations Specialists, and Announcers
4.0	Technical	36	Health Technologists and Technicians
		37	Engineering and Related Technologists and Technicians
		38	Science Technologists and Technicians
		39	Technicians: Except Health, Engineering, and Science
		67	Mechanics and Repairers
5.0	Office/Clerical	461	Secretaries and Stenographers
		462	Typists and Related Keyboard Operators
		463	General Office Clerical Occupations
		464	Information Clerks
		465	Communications Equipment Operators
		466	Correspondence Clerks and Order Clerks
		468	Cashiers and Bank Tellers
		469	Record Clerks
		471	Bookkeepers, Billing, Accounting and Statistical Clerks
		472	Mail and Postal Clerks
		473	Message Distribution Clerks
		474	Material Recording, Scheduling, and Distributing Clerks
		48	Computing and Office Equipment Operators
6.0	Crafts and Trades	61	Construction Trades

Standard Occupational Classifications	Human Asset Categories
7.0 Service	51 Protective Service Occupations 52 Service Occupations, Except Private Household and Protective 56 Other Agricultural and Related Occupations 64 Transportation Occupations 65 Material Moving Occupations, Except Transportation

Source: NCHEMS

Appendix C

Compiling Data on Allocation/Utilization of Human Assets by Function

While the amount of human assets available to an institution typically can be calculated in a straightforward manner from data residing in institutional databases, data about the allocation of those assets across institutional programs and about the actual utilization of those assets are more difficult to produce. They are not data that can be easily drawn from transactional records of most institutions; they are not by-products of normal operations in most cases. As a result, a special effort designed to produce these data is normally required. Suggestions for how this might be done are presented in this appendix. On the conviction that the focal point for the intrainstitutional development and use of these kinds of data is the department, these suggestions are presented on the assumptions that department will be the unit of analysis.

Compiling Allocation Data

Allocation data is prospective rather than retrospective; it reflects the plan for how human assets will be deployed over the course of the term or the academic year. These data are best provided by department chairs/unit managers. The task is straightforward:

- Each department is presented with a list of employees assigned to their department along with the amount of asset (number of service months) that individual represents to the department over the course of the year. For individuals assigned to multiple organizational units, only the proportionate share of effort assigned to their unit is indicated to each manager.

- The number of service months for each individual is allocated to the array of functions. In some cases, this allocation will be done on what amounts to a generic formula (e.g., all Instruction/Research Professionals are expected to devote 3/4 time to teaching and 1/4 time to research). In other instances, assignments must be made on a case-by-case basis. In either case, the unit manager is (or should be) in the best position to make this allocation.

Compiling Utilization Data

Utilization data are retrospective; they are developed at the end of the period (year) and indicate how the employee actually spent his or her term, irrespective of the plans established at the beginning of the period. The overall approach is similar--total service months for the year for each employee in each unit are calculated from centrally available data and then the amount of

effort is distributed across functions. While it is strongly suggested that the unit manager make this distribution when dealing with allocation (a priori) data, there are two ways to proceed with utilization (post facto) data:

- The department head may be asked to describe how each employee in their unit spent their time over the period; or

- The individual employees may be asked to report how they used their time.

Some institutions have long histories of asking individuals to provide data through use of Faculty Activity/Effort reports. Where this practice is in place, the data provided through this process should be utilized. The only concern is that the reporting categories used align reasonably well with the functional categories specified in this manual. Where this practice is not established, it is recommended that data be provided by unit managers and that special individual effort reporting procedures not be developed solely to support the need to generate this particular piece of data.

Appendix D

Illustration of Basic Calculations

The following formats, drawn from *A Manual for Budgeting and Accounting for Manpower Resources in Postsecondary Education* (NCES 1977) and modified slightly, constitute an example of moving from basic data to a managerial report on allocations of human assets to function.

Step 1. Service-Months of Each Type of Human Asset Available

Organizational Unit: Physics Department

Human Asset Category (1)	Name of Individual or Descriptor of Group of Employees (2)	Number of Individuals (3)	Appointment Period (in months) (4)	Workload Percent (5)	Service-Months (3)x(4)x(5) = (6)
Instruction/Research Professionals	J. Brown (Academic Year)	1	9	1.00	9.0
	J. Brown (Summer)	1	3	.50	1.5
	F. Owens	1	6	.50	3.0
	B. Franklin	1	12	1.00	12.0
	D. Gray	1	12	1.00	12.0
	J. Selby	1	9	.50	4.5
	R. Murphy	1	12	1.00	12.0
	L. Keller	1	9	1.00	9.0
	H. Pettit	1	10	1.00	10.0
	F. Morris	1	12	1.00	12.0
	K. Doer	1	12	1.00	12.0
	S. Cole	1	9	1.00	9.0
	S. Cole	1	3	.50	1.5
	Graduate Assistants	7	9	.50	31.5
	SUBTOTAL FOR CATEGORY				139.0
Technical	Research Technicians	2	12	1.00	24.0
	Summer Assistants	4	3	1.00	12.0
	SUBTOTAL FOR CATEGORY				36.0
Office/ Clerical	Departmental Secretaries	3	12	1.00	36.0
	SUBTOTAL FOR CATEGORY				36.0

Step 2. Allocation of Human Assets to Functions

Organizational Unit: Physics Department

Resource to be Allocated			Allocation		
Resource Category	**Description (1)**	**Amount* (2)**	**Program (3)**	**Function (4)**	**Amount* (5)**
Instruction/Research	J. Brown	10.5	Physics Inst.	Instruction	9.0
			Nuclear Research	Research	1.5
	F. Owens	3.0	Physics Inst.	Instruction	3.0
	B. Franklin	12.0	Physics Inst.	Instruction	6.0
			Sabbatical	Prof. Dev.	6.0
	D. Gray	12.0	Physics Inst.	Instruction	10.5
			Nuclear Research	Research	1.5
	J. Selby	4.5	Physics Inst.	Instruction	4.5
	R. Murphy	12.0	Physics Inst.	Instruction	12.0
	L. Keller	9.0	Physics Inst.	Instruction	9.0
	H. Pettit	10.0	Physics Inst.	Instruction	10.0
	F. Morris	12.0	Physics Inst.	Instruction	3.0
			Molecular Research	Research	3.0
			Research Admin.	Institutional Support	6.0
	K. Doer	12.0	Physics Inst.	Instruction	9.0
			Molecular Research	Research	3.0
	S. Cole	10.5	Physics Inst.	Instruction	6.0
			Audiovisual Services	Academic Support	4.5
	Graduate Assistants	31.5	Physics Inst.	Instruction	22.5
			Nuclear Research	Research	99.0
Technical Employees	All resources in Tech. Employee Category	36.0	Nuclear Research	Research	36.0
Office/Clerical	Departmental Secretaries	36.0	Physics Inst.	Instruction	24.0
			Nuclear Research	Research	12.0

* In service months

Step 3. Summary: Allocations of Manpower Resources to Programs

Organizational Unit: Physics Department

	Manpower Resources Available for Allocation, by Category						
	I/R Profs.	**Exec./Admin./ Mgrl. Profs.**	**Spec./Support Profs.**	**Technical**	**Office/ Clerical**	**Crafts/ Trades**	**Service**
Instruction	104.5	0	-	-	24.0	-	-
Research	18.0	-	-	36.0	12.0	-	-
Public Service	-	-	-	-	-	-	-
Academic Support	4.5	-	-	-	-	-	-
Student Services	-	-	-	-	-	-	-
Institutional Support	6.0	-	-	-	-	-	-
Operation & Maintenance of Plant	-	-		-	-	-	- -
Auxiliary Enterprises	-	-	-				
Hospitals	-	-	-	-	-	-	-
Professional Development	-	-	-	-	-	-	-
TOTALS	139.0				36.0	36.0	

Appendix E

Country Codes

COUNTRY	CODE	COUNTRY	CODE
AFGHANISTAN	AF	BURKINA FASO	BF
ALBANIA	AL	BURUNDI	BI
ALGERIA	DZ	CAMBODIA	KH
AMERICAN SAMOA	AS	CAMEROON	CM
ANDORRA	AD	CANADA	CA
ANGOLA	AO	CAPE VERDE	CV
ANGUILLA	AI	CAYMAN ISLANDS	KY
ANTARCTICA	AQ	CENTRAL AFRICAN REPUBLIC	CF
ANTIGUA & BARBUDA	AG	CHAD	TD
ARGENTINA	AR	CHILE	CL
ARMENIA	AM	CHINA	CN
ARUBA	AW	CHRISTMAS ISLAND	CX
AUSTRALIA	AU	COCOS (KEELING) ISLANDS	CC
AUSTRIA	AT	COLOMBIA	CO
AZERBAIJAN	AZ	COMOROS	KM
BAHAMAS	BS	CONGO, THE DEMOCRATIC REPUBLIC OF THE	CD
BAHRAIN	BH	COOK ISLANDS	CK
BANGLADESH	BD	COSTA RICA	CR
BARBADOS	BB	COTE D'IVOIRE	CI
BELARUS	BY	CROATIA	HR
BELGIUM	BE	CUBA	CU
BELIZE	BZ	CYPRUS	CY
BENIN	BJ	CZECH REPUBLIC	CZ
BERMUDA	BM	DEMOCRATIC YEMEN	YD
BHUTAN	BT	DENMARK	DK
BOLIVIA	BO	DJIBOUTI	DJ
BOSNIA & HERZEGOVINA	BA	DOMINICA	DM
BOTSWANA	BW	DOMINICAN REPUBLIC	DO
BOUVET ISLAND	BV	EAST TIMOR	TP
BRAZIL	BR	ECUADOR	EC
BRITISH INDIAN OCEAN TERRITORY	IO	EGYPT	EG
BRITISH VIRGIN ISLANDS	VG	EL SALVADOR	SV
BRUNEI DARUSSALAM	BN	EQUATORIAL GUINEA	GQ
BULGARIA	BG		

COUNTRY	CODE	COUNTRY	CODE
ERITREA	ER	ISRAEL	IL
ESTONIA	EE	ITALY	IT
ETHIOPIA	ET	JAMAICA	JM
FALKLAND ISLANDS	FK	JAPAN	JP
FAROE ISLANDS	FO	JORDAN	JO
FIJI	FJ	KAZAKSTAN	KZ
FINLAND	FI	KENYA	KE
FRANCE	FR	KIRIBATI	KI
FRENCH GUIANA	GF	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	KP
FRENCH POLYNESIA	PF	KOREA, REPUBLIC OF	KR
FRENCH SOUTHERN TERRITORIES	TF	KUWAIT	KW
GABON	GA	KYRGYZSTAN	KG
GAMBIA	GM	LAO PEOPLE'S DEMOCRATIC REPUBLIC	LA
GEORGIA	GE	LATVIA	LV
GERMANY	DE	LEBANON	LB
GHANA	GH	LESOTHO	LS
GIBRALTAR	GI	LIBERIA	LR
GREECE	GR	LIBYAN ARAB JAMAHIRIYA	LY
GREENLAND	GL	LIECHTENSTEIN	LI
GRENADA	GD	LITHUANIA	LT
GUADELOUPE	GP	LUXEMBOURG	LU
GUAM	GU	MACAU	MO
GUATEMALA	GT	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MK
GUINEA	GN	MADAGASCAR	MG
GUINEA-BISSAU	GW	MALAWI	MW
GUYANA	GY	MALAYSIA	MY
HAITI	HT	MALDIVES	MV
HEARD & MCDONALD ISLANDS	HM	MALI	ML
HOLY SEE (VATICAN CITY STATE)	VA	MALTA	MT
HONDURAS	HN	MARSHALL ISLANDS	MH
HONG KONG	HK	MARTINIQUE	MQ
HUNGARY	HU	MAURITANIA	MR
ICELAND	IS	MAURITIUS	MU
INDIA	IN	MAYOTTE	YT
INDONESIA	ID	MEXICO	MX
IRAQ	IQ	MICRONESIA	FM
IRELAND	IE	MOLDOVA, REPUBLIC OF	MD
ISLAMIC REPUBLIC OF IRAN	IR	MONACO	MC

COUNTRY	CODE	COUNTRY	CODE
MONGOLIA	MN	SAUDI ARABIA	SA
MONTSERRAT	MS	SENEGAL	SN
MOROCCO	MA	SEYCHELLES	SC
MOZAMBIQUE	MZ	SIERRA LEONE	SL
MYANMAR	MM	SINGAPORE	SG
NAMIBIA	NA	SLOVAKIA	SK
NAURU	NR	SLOVENIA	SI
NEPAL	NP	SOLOMON ISLANDS	SB
NETHERLANDS	NL	SOMALIA	SO
NETHERLANDS ANTILLES	AN	SOUTH AFRICA	ZA
NEW CALEDONIA	NC	SOUTH GEORGIA and THE SOUTH SANDWICH ISLANDS	GS
NEW ZEALAND	NZ	SPAIN	ES
NICARAGUA	NI	SRI LANKA	LK
NIGER	NE	ST. HELENA	SH
NIGERIA	NG	ST. KITTS AND NEVIS	KN
NIUE	NU	ST. PIERRE & MIQUELON	PM
NORFOLK ISLAND	NF	ST. VINCENT & THE GRENADINES	VC
NORTHERN MARIANA ISLANDS	MP	SUDAN	SD
NORWAY	NO	SURINAME	SR
OMAN	OM	SVALBARD & JAN MAYEN ISLANDS	SJ
PAKISTAN	PK	SWAZILAND	SZ
PALAU	PW	SWEDEN	SE
PANAMA	PA	SWITZERLAND	CH
PAPUA NEW GUINEA	PG	SYRIAN ARAB REPUBLIC	SY
PARAGUAY	PY	TAIWAN, PROVINCE OF CHINA	TW
PERU	PE	TAJIKISTAN	TJ
PHILIPPINES	PH	TANZANIA, UNITED REPUBLIC OF	TZ
PITCAIRN	PN	THAILAND	TH
POLAND	PL	TOGO	TG
PORTUGAL	PT	TOKELAU	TK
PUERTO RICO	PR	TONGA	TO
QATAR	QA	TRINIDAD & TOBAGO	TT
REUNION	RE	TUNISIA	TN
ROMANIA	RO	TURKEY	TR
RUSSIAN FEDERATION	RU	TURKMENISTAN	TM
RWANDA	RW	TURKS & CAICOS ISLANDS	TC
SAINT LUCIA	LC		
SAMOA	WS		
SAN MARINO	SM		
SAO TOME & PRINCIPE	ST		

COUNTRY	CODE
TUVALU	TV
UGANDA	UG
UKRAINE	UA
UNITED ARAB EMIRATES	AE
UNITED KINGDOM (GREAT BRITAIN)	GB
UNITED STATES MINOR OUTLYING ISLANDS	UM
UNITED STATES OF AMERICA	US
UNITED STATES VIRGIN ISLANDS	VI
URUGUAY	UY
UZBEKISTAN	UZ
VANUATU	VU
VENEZUELA	VE
VIET NAM	VN
WALLIS & FUTUNA	WF
WESTERN SAHARA	EH
YEMEN	YE
YUGOSLAVIA	YU
ZAMBIA	ZM
ZIMBABWE	ZW
UNKNOWN OR UNSPECIED	ZZ

Source: *Codes for Representation of Names of Countries* [ISO 3166-1974 (E), ISO 3166-1: 1997 (E/F)]. Available from American National Standards Institute, Inc., 11 West 42nd Street, 13th Floor, New York, New York 10036 or National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22100.

Appendix F

Language Codes

CODE	LANGUAGE	CODE	LANGUAGE
AA	AFAR	GU	GUJARATI
AB	ABKHAZIAN	HA	HAUSA
AF	AFRIKAANS	HI	HINDI
AM	AMHARIC	HR	CROATIAN; HRVATSKI
AR	ARABIC	HU	HUNGARIAN; MAGYAR
AS	ASSAMESE	HY	ARMENIAN;HAYEREN
AY	AYMARA	IA	INTERLINGUA
AZ	AZERBAIJANI	IE	INTERLINGUE
BA	BASHKIR	IK	INUPIAK
BE	BYELORUSSIAN	IN	INDONESIAN; BAHASA INDONESIA
BG	BULGARIAN		
BH	BIHARI	IS	ICELANDIC; ISLENZK
BI	BISLAMA	IT	ITALIAN
BN	BENGALI; BANGLA	IW	HEBREW; IWRITH
BO	TIBETAN; BODSKAD	JA	JAPANESE; NIHONGO
BR	BRETON	JI	YIDDISH; JIDDISCH
CA	CATALAN	JW	JAVANESE; BAHASA JAWA
CO	CORSICAN		
CS	CZECH	KA	GEORGIAN; KARTULI
CY	WELSH	KK	KAZAKH
DA	DANISH	KL	GREENLANDIC; KALAALLISUT
DE	GERMAN		
DZ	BHUTANI	KM	CAMBODIAN; KHMER
EL	GREEK	KN	KANNADA
EN	ENGLISH	KO	KOREAN; CHOSON-O
EO	ESPERANTO	KS	KASHMIRI
ES	SPANISH	KU	KURDISH; ZIMANY KURDY
ET	ESTONIAN		
EU	BASQUE; EUSKERA	KY	KIRGHIZ; KYRGYZ
FA	PERSIAN; FARSI	LA	LATIN
FI	FINNISH; SUOMI	LN	LINGALA
FJ	FIJI	LO	LAOTHIAN; PHA XA LAO
FO	FAROESE	LT	LITHUANIAN
FR	FRENCH	LV	LATVIAN, LETTISH
FY	FRISIAN	MG	MALAGASY
GA	IRISH; GAEILGE	MI	MAORI
GD	SCOTS GAELIC	MK	MACEDONIAN
GL	GALICIAN	ML	MALAYALAM
GN	GUARANI	MN	MONGOLIAN

CODE	LANGUAGE	CODE	LANGUAGE
MO	MOLDAVIAN	SO	SOMALI
MR	MARATHI	SQ	ALBANIAN; SHQIP
MS	MALAY; BAHASA MALAYSIA	SR	SERBIAN; SRPSKI
		SS	SISWATI
MT	MALTESE	ST	SESOTHO
MY	BURMESE; MYANMASA	SU	SUNDANESE
NA	NAURU	SV	SWEDISH; SVENSKA
NE	NEPALI	SW	SWAHILI
NL	DUTCH; NEDERLANDS	TA	TAMIL
NO	NORWEGIAN	TE	TELUGU
OC	OCCITAN	TG	TAJIK
OM	(AFAN) OROMO	TH	THAI
OR	ORIYA	TI	TIGRINYA
PA	PUNJABI; PANJABI	TK	TURKMEN
PL	POLISH	TL	TAGALOG
PS	PASHTO, PUSHTO	TN	SETSWANA
PT	PORTUGUESE	TO	TONGA
QU	QUECHUA	TR	TURKISH
RM	RHAETO-ROMANCE	TS	TSONGA
RN	KIRUNDI	TT	TATAR
RO	ROMANIAN	TW	TWI
RU	RUSSIAN	UK	UKRAINIAN
RW	KINYARWANDA	UR	URDU
SA	SANSKRIT	UZ	UZBEK
SD	SINDHI	VI	VIETNAMESE
SG	SANGHO	VO	VOLAPUK
SH	SERBO-CROATIAN	WO	WOLOF
SI	SINGHALESE	XH	XHOSA
SK	SLOVAK	YO	YORUBA
SL	SLOVENIAN	ZH	CHINESE; ZHONGWEN
SM	SAMOAN	ZU	ZULU
SN	SHONA		

Source: *Codes for the Representation of Names of Languages* (ISO 639). Available from the American National Standards Institute, Inc., 11 West 42nd Street, 13th Floor, New York, New York 10036.

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