

Requirements for an NSF Biographical Sketch

Guidelines: Adapted from the NSF *Proposals and Award Policies and Procedures Guide, 2019*

A biographical sketch (limited to two pages) is required for all key project staff. The following information must be provided in the order and format specified below:

(i) Professional Preparation. A list of the individual's undergraduate and graduate education and postdoctoral training in the format indicated below:

Undergraduate Institution(s), location	Major	Degree & Year
Graduate Institution(s), location	Major	Degree & Year
Postdoctoral Institution(s), location	Area	Inclusive Dates (years)

(ii) Appointments. A list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.

(iii) Products. A list of: (i) up to five products most closely related to the proposed project; and (ii) up to five other significant products, whether or not related to the proposed project. Acceptable products must be citable and accessible including but not limited to publications, data sets, software, patents, and copyrights. Unacceptable products are unpublished documents not yet submitted for publication, invited lectures, and additional lists of products. Only the list of 10 will be used in the review of the proposal. Each product must include full citation information including (where applicable and practicable) names of all authors, date of publication or release, title, title of enclosing work such as journal or book, volume, issue, pages, website and Uniform Resource Locator (URL) or other Persistent Identifier. If only publications are included, the heading "Publications" may be used.

(iv) Synergistic Activities. A list of up to five distinct examples that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples should be specific and could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in STEM; and service to the scientific and engineering community outside of the individual's immediate organization. Examples with multiple components are not permitted.

REQUIRED FORMAT: Times New Roman (11 or 12-point font) or Arial (10, 11, or 12-point font) and 1 inch margins. The attached biographical sketch should serve as both a template and an example.

DO NOT INCLUDE CONTACT INFORMATION (address, phone, email) OR OTHER PERSONAL INFORMATION (family, hobbies, missionary service, etc.).

DO NOT INCLUDE SECTIONS OTHER THAN THOSE SPECIFIED. That is, no section for Awards, Presentations, Service, etc. You may, however, include some of these items in the Synergistic Activities section if they are relevant to the project you are proposing.

Collaborators & Other Affiliations are no longer part of the Biographical Sketch. This information is attached in a separate Excel file called Collaborators & Other Affiliations (COA).

**UVU has recently had proposals returned for non-compliance on these issues.
Don't let yours be one of them.**

Additional Helps for Biographical Sketches

A biographical sketch should display your unique background and be tailored to the specific proposal. In other words, target the biographical sketch to the specific funding opportunity being sought. For instance, you won't list all of your publications (**only up to 10**), so select those most relevant to the current funding opportunity and those most important to your professional activities, usually including the most recent.

In the Products section:

- Pay attention to the list of unacceptable products. (However, some of these could be included in the Synergistic Activities section.) Don't list publications that are being prepared or have not been accepted for publication.
- Generally, list in reverse chronological order.
- Divide your list of 10 into two sections: *Products Most Closely Related to the Proposed Project* and *Other Significant Products*.
- Remember to provide a URL or Persistent Identifier.
- Ph.D. theses may be included if access is provided.
- Conference presentations are not preferred, but are allowed, especially if conference papers or abstracts were published.
- If a publication includes student authors, indicate this with an asterisk following the student's name and a note in the section heading such as: [An asterisk (*) indicates a student author.]

In the Synergistic Activities section, you list (and describe) up to 5 activities (**no more than 5**) that demonstrate the broader impact of your professional and scholarly activities, particularly those focusing on integration, transfer, and creation of knowledge. If you are the PI, try to include activities that show your leadership and project completion abilities. If the proposal includes undergraduate research, describe your experience with student researchers and the outcome (their graduation, enrollment in graduate school, or job in field). NSF expects single, discrete activities, but you can explain about an activity and why it is important or its broad impact. This section is different than what is typically included in a CV

* Note that a former style of providing broad headings and listing multiple examples under each is not permitted and will be rejected by NSF.

Examples:

- Awarded a United Nations Environment Programme (USUNEP) 500 Award for the year 1991. This was due to my efforts in clean air research and activism.
- Developed a new curriculum in the Department of Physics at Utah Valley University titled "Space Plasma Physics" to introduce undergraduate students to the field of Plasma Physics and applications towards the Space Environment.
- **Chairman, Utah Mathematics General Education Tuning Team** (2011 – 2014) – Led team of faculty from all Utah System of Higher Education institutions and personnel from the Utah State Office of Education) personnel in determining core outcomes common to General Education (GE) Mathematics courses across the state. The team wrote the learning outcomes with application examples for the primary Math GE courses, which has been used by educators throughout Utah.
- **OPAL Collaboration.** From 1990 to 1997, I worked with a collaboration of 350 physicists from 30 institutions across 8 countries, involved with the planning, construction, installation and operation of a large particle detector at the European Institute for Research in Particle Physics (CERN) in Geneva, Switzerland. We developed analysis methods and coordinated measurement and publication for the tau lepton lifetime, which remains one of the most precise determinations.
- I served on the landslide Salt Lake City Hazards Impact Committee, funded by the Federal Emergency Management Agency, that assessed landslide hazards that may impact Salt Lake City and recommended actions to reduce those hazards (2000 – 2001).

Gordon E. Stokes
Principal Investigator

Professional Preparation

Brigham Young University, Provo, UT	Physics	B.S.	1961
University of Idaho, Moscow, ID	Physics	M.S.	1969
Brigham Young University, Provo, UT	Curriculum Design	Ed.D.	1981

Appointments

Utah Valley State College Appointments (2001 – present)

Associate Dean, School of Technology and Computing, May 2001-present

Brigham Young University Appointments (1969 – 1998)

Professor Emeritus, Computer Science, Sept. 1998-present
 Undergraduate Coordinator, Computer Science Department, 1995-1997
 Associate Chair, Computer Science Department, 1992-1995
 Director, Center for Computer-Based Education Technologies, 1987-1991
 Professor of Computer Science, Computer Science Department, 1985-1998
 Associate Professor, Department of Computer Science, 1978-1985
 Assistant Professor, Department of Computer Science, 1973-1978
 Assistant Director, Computer Services, 1970-1973
 Assistant Dean, College of Physical and Engineering Sciences, 1969-1970

Other Appointments

Consultant, a variety of organizations including: The State of Arkansas, The Church of Jesus Christ of Latter-day Saints Genealogical Society, Winnebago Corporation, Vought Corporation, WICAT Corporation, Synergy Corporation, and Boeing Corporation.
 Research Physicist, Senior Systems Analyst, *Idaho Nuclear Corporation*, 1966-1969
 Research Physicist, *Phillips Petroleum Corporation*, 1961-1966

Products

Products most related to the proposed project:

- Stokes, Gordon “Assessment of Student Competence in Computer Science”, Chap.8 Assessing Student Competence in Accredited Disciplines, Palumbo and Banta, Stylus Publishing, 2001. [Website and Uniform Resource Locator \(URL\) or other Persistent Identifier.](#)
- Lidtke, Doris K., Gordon E. Stokes, “An Information Systems-Centric Curriculum, ISCC '99,” *The Journal of Systems and Software*, 49:2-3. (Dec. 1999), pp 171-175. Elsevier Science. [URL or other Persistent Identifier.](#)
- Lidtke, Doris, Gordon E. Stokes, Jimmie Haines, Michael C. Mulder: editors, “ISCC '99 Educating the Next Generation of Information Specialists in Collaboration with Industry: An Information Systems-Centric Curriculum,” An NSF Task Force Report, July 1999. [URL or other Persistent Identifier.](#)
- Stokes, Gordon E., " An Information System-Centric Curriculum for the 21st Century,” Proceedings of the Second International Al-Sham Conference on Information Technology, The Syrian Computer Society, April 27-29, 1999, Damascus, Syria. [URL or other Persistent Identifier.](#)
- Stokes, Gordon E., “The Utilization of Information Technology for the Presentation of Computer Science Concepts to Undergraduate Students,” Proceedings of the Workshop on Information Technology in Higher Education, The University of Jordan and the Association of Arab Universities, April 10-11, 1999, Amman, Jordan. [URL or other Persistent Identifier.](#)

Other significant products: *[The asterisk (*) denotes a student author.]*

Stokes, Gordon E., "Rethinking the Current Formula:" A segment of the Article "Keeping Pace with an Information Society," Computer, IEEE Computer Society, November 1997. [URL or other Persistent Identifier.](#)

Mulder, Michael C., Gordon E. Stokes, Doris Lidtke, "Enterprise Enhanced Education: An Information Technology Enabled Extension of Traditional Learning Environments," Proceedings of the 28th SIGCSE Technical Symposium on Computer Science Education, February 27-March 1, 1997, San Jose, CA. [URL or other Persistent Identifier.](#)

Barker, Keith, David L. Soldan, and Gordon E. Stokes, "Laboratory Experiences in Computer Science and Engineering," Computer Science Education, Volume 1, Number 1, 1988. ABLEX Publishing, Norwood, New Jersey. [URL or other Persistent Identifier.](#)

Christensen, Larry C., G. E. Stokes, Bill Hays, "Design Strategies for a Computer-Based Instruction System," ACM SIGCSE Bulletin, February 6-7, 1986, Cincinnati, OH. [URL or other Persistent Identifier.](#)

Stokes, G. E., R.P. Schuman, and O.D. Simpson, "The Total Neutron Cross Section of 115-Day Tantalum-182 from 0.01 to 1000 eV," *Nuclear Science and Engineering*, 33: 16-23, July 1968. [URL or other Persistent Identifier.](#)

Synergistic Activities *[proposal involved curriculum development & student assessment]*

Principal **designer of curriculum** for a computer-based computer science course at Brigham Young University in Provo, Utah that served over 6,000 students from 1984 to 1998.

Member of the **Accreditation Board for Engineering and Technology** (ABET) Computing Accreditation Commission (CAC) since 1986 and team chair of several accreditation teams.

Member of an **NSF Joint Taskforce** consisting of industry and academic representatives that produced a curriculum for improving the education of Information Systems Specialists. It was titled "ISCC'99 Educating the Next Generation of Information Systems specialists in Collaboration with Industry."

An **invited presenter** at a seminar at University of California – Santa Barbara on conducting **outcomes-based assessment** activities for ABET accreditation.

Awarded 7 **major grants** from private industries including Hewlett-Packard Corporation, totaling over \$1,500,000. All were completed on time and within budget and resulted in peer-reviewed publications or other significant products.