

First Female to Earn a Ph.D. in Germany & Her Algebraist Granddaughter – Grace Chisolm Young & Sylvia Wiegand



https://mathhistory.st-andrews.ac.uk/Biographies/Chisholm_Young/ https://www.researchgate.net/profile/Sylvia_Wiegand

Grace Chisolm Young (March 15, 1868 – March 29, 1944), was an English mathematician and in 1895 she became the first woman to earn a Ph.D. in any subject in Germany. (Sonya Kovalevskaya had earlier in 1874 been granted a Ph.D. from the same university, becoming the first female to be awarded a doctorate in Europe, but by special arrangement, not the usual route.) Although she was a stellar student in England, performing better than the male students,

women were not yet able to earn doctorates in England. Her husband was also a mathematician and they often collaborated on projects, including research articles and the first ever textbook on set theory, *The Theory of Sets of Points*. One of her sons became a mathematics professor and he had a daughter, Sylvia Wiegand, who is a well-known mathematician. Dr. Wiegand also has a husband who is a mathematician and they have collaborated some, as well. Both Drs. Wiegand are algebraists and are retired from the University of Nebraska. Sylvia served a term as the president of the Association for Women in Mathematics.

Required Reading

- **Claire Jones (2000) Grace Chisholm Young: gender and mathematics around 1900, *Women's History Review*, 9:4, 675-693,** <https://www.tandfonline.com/doi/pdf/10.1080/09612020000200266>
- Wiegand, Sylvia. "Grace Chisholm Young," *Newsletter of the Association for Women in Mathematics*, Vol 7, No. 3 (May-June 1977), 5-10. http://www.drivehq.com/file/df.aspx/shareID8755087/fileID748716915/1977_05-06.pdf

Optional Reading

- **Sylvia Wiegand, Grace Chisholm Young and Agnes Dunnett**, from the *Grandma Got STEM* blog, <https://ggstem.wordpress.com/2013/02/19/sylvia-wiegand-grace-chisholm-young-and-agnes-dunnett/>
- **Grace Chisholm Young**, https://mathshistory.st-andrews.ac.uk/Biographies/Chisholm_Young/
- **Grace Chisholm Young**, https://en.wikipedia.org/wiki/Grace_Chisholm_Young
- **Math Equals: Biographies of Women Mathematicians+Related Activities**, by Teri Perl, Addison Wesley, ISBN 0-201-05709-3, p. 149-160.
- **Laurence Chisholm Young**, https://mathshistory.st-andrews.ac.uk/Biographies/Young_Laurence/
- **Grace Chisholm Young**, <https://www.agnesscott.edu/lriddle/women/young.htm>
- **Notable Women in Mathematics: A Biographical Dictionary**, edited by Charlene Morrow and Teri Perl, Greenwood Press, ISBN 0-313-29131-4, *Sylvia Young Wiegand*, p. 272-277, *Grace Chisolm Young*, p. 277-282