Last updated: 02/28/2024

2016

2015

2014

2014

2009

# Grant M. Berry

Curriculum Vitae

Mendel Science Center G65-C Villanova University 800 E. Lancaster Ave. Villanova, PA 19085

\$ 2,000

\$ 2,000

\$ 3,000

\$ 4,000

\$ 2,000

Email: grant.berry@villanova.edu
Phone: +1 (857) 762-4887
Web: https://grantberry.info

Interests: Language Variation and Change, Phonology, Bilingualism, Cognitive Science, Machine Learning

Academic Appointments					
Assistant Professor		2020-Present			
	rtment of Spanish (~0.6 FTE); Cognitive Science Program (~0.4 FTE) nova University (Villanova, PA)				
Director, Language Use and Variation (LUV) Lab Mendel Science Center G65-B (Web: luv-lab.info)		2020-Present			
Villat	nova University (Villanova, PA)				
Other Appointments					
Applied Scientist II		2021-2022			
Amazon Prime Video (Remote); 0.2-0.5 FTE					
	al Program Manager, Data Quality	2019-2020			
	ta Applied Modeling and Data Services; Amazon (Cambridge, MA)	2018-2019			
	Language Engineer				
Alexa	Household Organization; Amazon Canada (Vancouver, BC)				
Education and Training					
-	Visiting Scholar, Radboud University	2024			
PhD	Dual title in Spanish and Language Science, The Pennsylvania State University	2018			
-	Visiting Scholar, University of Pennsylvania	2017			
-	Visiting Scholar, Max Planck Institute for Psycholinguistics	2015			
-	Linguistic Society of America Summer Institute, University of Chicago	2015			
MA	Spanish, The Pennsylvania State University	2014			
-	Fulbright Teaching Assistantship, Universidad Nacional de Río Cuarto, Argentina	2011			
BA	Spanish, Truman State University	2010			
BS	Mathematics, Truman State University	2010			
Research Funding ≥ \$1,000 (amounts are rounded to the nearest \$100)					
\$35,000	Research Catalyst Grant (co-PL: Joseph C. Toscano), Villanova University	2023			
\$1,000	Villanova Match Research Program (Support for 1st-year Student RA)	2023			
\$12,000	University SU Grant, Villanova University	2022			
\$1,000	Villanova Match Research Program (Support for 1st-year Student RA)	2022			
\$3,300	Small Research Grant, Villanova Institute for Research & Scholarship (VIRS)	2021			
\$15,100	NSF Doctoral Dissertation Research Improvement Grant (#BCS1651061)	2017			
\$ 1,000	Center for Global Studies Fellowship, Penn State University	2017			

Superior Teaching and Research (STAR) Award, Penn State University

Superior Teaching and Research (STAR) Award, Penn State University

RGSO Dissertation Award, Penn State University

Graduate Scholar Award, Penn State University

Student Research Grant, Truman State University

#### Peer-reviewed Publications (\* denotes undergraduate student collaborators)

#### Stuff that's in the Pipeline

- **Berry, G.M.** (On Hold). Relative syllable duration and pitch alignment in the Spanish of Córdoba, Argentina. Preprint: 10.31234/osf.io/spfqx
- **Berry, G.M.** (In Prep). Sex-differentiated strategies for stereotype avoidance: OH-Lowering in Philadelphia Puerto Rican English. (Submission planned for Dec 2023.)
- **Berry, G.M.**, Caselli, J.\* & Gunderson, S.\* (In Prep). Reactive control modulates the integration of segmentally constrained phonetic variation. (Submission planned for April 2024.)

#### Published or Forthcoming

- Patchell, A.\*, & **Berry, G.M.** (2024). TH-stopping in Philadelphia Puerto Rican English. *Language Variation and Change*. FirstView doi: 10.1017/S0954394524000012
- Coretta, S., Casillas, J.V.,...**Berry, G.M.**, ..., Roettger, T. (2023). Multidimensional signals and analytic flexibility: Estimating degrees of freedom in human speech analyses. *Advances in Methods and Practices in Psychological Science* 6(3), 25152459231162570.
- Gupta, P., Nelakanti, A., **Berry, G.M.**, & Sharma, A. (2022). Interactive post-editing for verbosity-controlled translation. In *Proceedings of the 29<sup>th</sup> International Conference on Computational Linguistics* (COLING 2022). https://aclanthology.org/2022.coling-1.454.pdf
- Requena, P.E., & **Berry, G.M.** (2021). Cross-linguistic influence in L1 processing of morphosyntactic variation: Evidence from L2 learners. *Applied Psycholinguistics*, 42(1), 153-180. doi:10.1017/S0142716420000685
- Ilola, I., Mikulski, A., Rodriguez-Padial., A., & **Berry, G.M.** (2019). Written feedback in Heritage Spanish classrooms: A national survey of students and educators. *Revista Española de Lingüística Aplicada* [Spanish Journal of Applied Linguistics], *32*(2), 543-572. doi: 10.1075/resla.18018.mik
- **Berry, G.M.**, & Ernestus, M. (2018). Phonetic alignment in English as a *lingua franca*: Coming together while splitting apart. *Second Language Research*, 34(3), 343-370. doi: 10.1177/0267658317737348
- Torres Cacoullos, R., & **Berry, G.M.** (2018). Sociolinguistic variation in US Spanish. In Potowski, K. (Ed.), *Handbook of Spanish as a Heritage/Minority Language*. Routledge, 254-268.
- **Berry, G.M.** (2017). Structural autonomy and aspectual import: A new(er) Spanish Progressive. *Probus*, 29(2), 205-232. doi: 10.1515/probus-2015-0001
- **Berry, G.M.** (2016). Processing linguistic variation through dual mechanisms of cognitive control. *Linguistics V anguard*, 2(s1). doi: 10.1515/lingvan-2016-0033

## Other Honors/Awards

- 2022 Echo 25: 25 Exceptional Alumni Under 40, Truman State University
- 2018 Ray Lombra Award for Excellence in Research (\$1,000)
- 2017 Humanities Initiative Dissertation Teaching Release, Penn State University
- 2016 Edwin Erle Sparks Fellowship, Penn State University College of the Liberal Arts
- 2016 NSF PIRE Travel Grant, Penn State University Center for Language Science
- 2016 Jesús Díaz Prize for Spanish, Penn State University Dep't. of Spanish, Italian, and Portuguese
- 2015 NSF PIRE Graduate Fellowship, Penn State University Center for Language Science
- 2015 Linguistic Society of America Institute Fellowship
- 2014 Jesús Díaz Prize for Spanish, Penn State University Dep't. of Spanish, Italian, and Portuguese
- 2010 Gabriela Mistral Award, Sigma Delta Pi Spanish Honor Society
- 2010 Senior Leadership Award, Truman State University
- 2010 Outstanding Spanish Student, Truman State University
- 2009 Student-initiated Course Grant, Truman State University (\$1,000)
- 2006 Pershing Scholarship (Tuition, R&B, \$4,000 Study Abroad Stipend), Truman State University
- 2006 Missouri Department of Higher Education Academic Scholarship (\$8,000)

### **Invited Talks and Workshops**

1. Why I left academia... and why I came back.

Basque Center on Cognition, Brain, and Language; 5 May 2022

2. AI and bias: Who's to blame?

Villanova University; Charles Widger School of Law; 1 Jan 2022

- **3.** From the periphery to the forefront: Puerto Rican English and Philadelphia sound change University of Pennsylvania Integrated Language Science & Technology Series; 16 Apr 2021
- **4.** Legal applications of artificial intelligence for social justice

Villanova University; Charles Widger School of Law; 21 Jan 2021

5. Visualizing linguistic data in R

Penn State University; Department of Spanish, Italian, and Portuguese; 23 Feb 2018

- **6.** On the cognitive processing strategies underlying the propagation of sound change Penn State University; Center for Language Science Speaker Series; 12 Jan, 2018
- 7. Dimension reduction methods: Principal component analysis, factor analysis, and *k*-means clustering Penn State University Department of Spanish, Italian, and Portuguese; 27 Nov 2017
- **8.** Best practices in data visualization: An introduction to the *ggplot2* package in R University of Pittsburgh; Department of Linguistics; 10 Nov 2017
- 9. Echoes from below: Minority adoption of majority sound change

University of Pittsburgh; Linguistics Colloquium Talk; 10 Nov 2017

- **10.** Cognitive control, phonological integration, and the propagation of sound change University of Pennsylvania; Common Grounds Speaker Series; 12 May 2017
- 11. Shrinking down sound change: Cognitive control and phonological adaptation Penn State University; Distinguished Language Science Colloquium; 14 April 2017
- 12. Using OpenSesame for experiment building

University of Pennsylvania; Language Variation and Cognition Lab; 29 March 2017

- 13. RE-assessment and RE-adjustment: Optimizing random effects in linear mixed effects models
  Guest lecture in LING 660: Research Seminar in Sociolinguistics, University of Pennsylvania
  (Instructor: Meredith Tamminga). 20 March, 2017
- 14. Shifting leftward? Syllable duration and pitch anchoring in Central Argentine Spanish Ohio State University; Hispanic Linguistics Colloquium; 17 Feb 2017
- **15.** Dual mechanisms of cognitive control and phonological adaptation University of Pennsylvania; Language Variation and Cognition lab; 1 Feb 2017
- **16.** Phonetic alignment in English as a *lingua franca*: Effects of style, proficiency, and L1 influence Penn State University; Center for Global Studies Brown Bag Lecture; 28 Sept 2016
- 17. The long and short of it: How alignment and cognitive processing may influence sound change Penn State University; Distinguished Language Science Colloquium; 22 April 2016
- **18.** When *habla* isn't the same as *está hablando*: Grammaticalization of the Spanish Progressive Truman State University; Sigma Delta Pi Distinguished Alumni Speaker Series; 7 April 2016
- 19. How a Liberal Arts education prepared me for graduate school

Truman State University; Sigma Delta Pi Distinguished Alumni Speaker Series; 6 April 2016

20. Phonetic alignment and style shifting in English as a lingua franca

Truman State University; Sigma Delta Pi Distinguished Alumni Speaker Series; 5 April 2016

21. Using literature in the study of language change

Truman State University; Sigma Delta Pi Distinguished Alumni Speaker Series; 4 April 2016

- 22. Coming together, splitting apart: Vocalic accommodation in EFL discourse
  - Radboud University Nijmegen; Centre for Language Studies; 15 Feb 2016

**23.** Individual differences in the adoption of variable phonology: Preliminary findings Max Planck Institute for Psycholinguistics; Sound Learning Lab; 13 Oct 2015

**24.** Prosodic and social predictors of speech in central Argentina: The *tonada cordobesa* Universiteit Leiden; Centre for Linguistics; 9 October, 2015

- 25. Transcribing in ELAN by Intonation Units
  - Penn State University; SPAN 597 Course (Functional Syntax); 26 March 2015
- **26.** PRAAT scripting workshop
  - University of British Columbia; Speech in Context Lab; 10 March 2015
- 27. Data visualization in R using ggplot2
  - University of British Columbia; Speech in Context Lab; 9 March 2015

#### Peer-reviewed Conference Talks and Posters

#### Papers/Talks

- 1. Berry, G.M., Caselli, J., & Toscano, J.C. (2024). Acoustic change detection as a predictor of phonological adaptation. Variation and Language Processing 6. Vigo, Spain. 26-28 Jun.
- **2.** Gupta, P., Nelakanti, A., **Berry, G.M.**, & Sharma, A. (2022). Interactive post-editing for verbosity-controlled translation. 29<sup>th</sup> International Conference on Computational Linguistics. Gyeongju, Republic of Korea., 12-17 Oct.
- **3. Berry, G.M.** (2022). Cognitive correlates of phonological adaptation: Reactive control predicts participation in simulated sound change. Annual Meeting of the Linguistic Society of America. Washington, D.C., 6-9 Jan.
- **4.** Patchell, A.\*, & **Berry, G.M.** (2022). Do Philly Puerto Ricans say *dat*? An acoustic analysis of TH-Stopping as a change in-progress. Annual Meeting of the Linguistic Society of America. Washington, D.C., 6-9 Jan.
- **5. Berry. G.M.** (2021). Cognitive processing strategy and the phonological integration of phonetic variation. New Ways of Analyzing Variation 49. University of Texas at Austin. 19-24 Oct.
- **6.** Requena, P.E., & **Berry, G.M.** (2021). L2 learners' processing of syntactic variation in the L1. Variation and Language Processing 5. University of Copenhagen. 25-27 Aug.
- 7. **Berry, G.M.** (2018). Minorities in the lead? Puerto Rican adoption of Philadelphia sound changes inprogress. New Ways of Analyzing Variation 47. New York University. 18-21 Oct.
- **8. Berry, G.M.** (2018). Echoes from below: Puerto Rican adoption of Philadelphia sound changes inprogress. 9th Int'l Workshop on Spanish Sociolinguistics. Queens College. 4-7 April.
- **9. Berry, G.M.**, & Ernestus, M. (2016). Alignment-induced phonological variation in non-native dialogue. New Ways of Analyzing Variation 45. Simon Fraser University. 3-6 Nov.
- **10. Berry, G.M**. (2016). What Puerto Ricans can tell us about the actuation of sound change: Social and cognitive constraints on the adoption of changes-in-progress. 8th Int'l Workshop on Spanish Sociolinguistics. Universidad de Puerto Rico, Río Piedras. 13-16 April.
- **11. Berry, G.M.** (2016). Proactive inhibitory control and the adoption of sound changes-in-progress. Sociolinguistic Variation and Language Processing. Virginia Tech. 31 March 2 April.
- **12.** Torres Cacoullos, R., **Berry, G.M.**, Champi, C., Perrotti, L., & Ramos, M. (2015). Expresión variable de los pronombres de sujeto: Diferencias entre él y ella [Variable expression of subject pronouns: Distinguishing él and ella]. X Congreso Internacional de la Historia de la Lengua Española [Tenth International Conference on the History of Spanish]. Universidad de Zaragoza. 7-11 Sept.
- **13. Berry, G.M.** (2015). A quantitative account of the *tonada cordobesa*: The contribution of pitch, duration, and style in production. Ohio State Congress on Hispanic and Lusophone Linguistics. Ohio State University. 10-11 April.
- **14.** Torres Cacoullos, R., **Berry, G.M.**, Champi, C., Perrotti, L., & Ramos, M. (2014). Early conditioning of Spanish variable subject expression. New Ways of Analyzing Variation 43. Chicago. 23-26 Oct.
- **15. Berry, G.M**. (2014). Transcribing the 'tune': Prosodic and sociolinguistic properties of the *tonada cordobesa*. First Symposium on Tone and Intonation in the Spanish-Speaking World. University of Massachusetts, Amherst. 10-11 Oct.
- **16. Berry, G.M**. (2014). Concretization of a construction: Conditioning the Progressive in 20th-century Spain. Georgetown University Roundtable on Languages and Linguistics. Georgetown. 13-16 March.

**17. Berry, G.M.** (2014). Ghosts in the bilingual machine: The role of language experience in CC resolution strategies for Spanish-English bilinguals. Current Approaches to Spanish and Portuguese Second Language Phonology. Georgetown University. 13-16 March.

#### Posters

- 1. Requena, P. E. & Berry, G. M. (2021). L2 learners' processing of syntactic variation in the L1. Paper to be presented online at the 5th Variation and Language Processing Conference (VALP5). Copenhagen, Denmark. 25-27 Aug.
- **2. Berry, G.M.** (2018). Cognitive processing strategy and the phonological integration of phonetic variation. 16<sup>th</sup> meeting of the Association for Laboratory Phonology (LabPhon 16). Lisbon. 19-22 June.
- **3. Berry, G.M**. (2017). Dual mechanisms of cognitive control modulate the integration of phonological variation. 4<sup>th</sup> Workshop on Sound Change. Edinburgh. 20-22 April.
- **4.** Requena, P.E., & **Berry, G.M**. (2017). A bilingual advantage in processing variation: Evidence for shared morphosyntactic representations. Symposium on Bilingualism in the Hispanic and Lusophone World (BHL). Florida State University. 27-29 Jan.
- **5. Berry, G.M.**, & Ernesus, M. (2016). Phonetic alignment in English as a lingua franca. 15th Meeting of the Association for Laboratory Phonology (LabPhon 15). Cornell. 13-16 July.
- **6.** Gullifer, J.W., **Berry, G.M.**, Navarro-Torres, C., Kroll, J.F., & Dussias, P.E. (2016). What about the syntax? Bilingual word recognition in sentence context. International Meeting of the Psychonomic Society. Granada, Spain. 5-8 May.
- **7. Berry, G.M.**, & Benevento, N. (2016). Contact on a different time scale: Phonetic variation in a longstanding contact variety. Annual Meeting of the Linguistic Society of America. Washington, D.C. 7-10 Jan.
- **8. Berry, G.M.**, & Torres Cacoullos, R. (2015). Inferring the social from the linguistic: Clustering and stratification in NM Spanish. Linguistic Society of America Institute. University of Chicago. 14 July.
- **9.** Gullifer, J.W., Kroll, J.F., Dussias, P.E., Navarro-Torres, C., & **Berry, G.M**. (2015). Using syntactic priming to identify cross-language constraints in bilingual language processing. International Symposium on Bilingualism. Rutgers University. 20-24 May.
- **10. Berry, G.M.** (2014). Alternating aspect: Conditioning the Progressive in 20th-century Spain. 7th Int'l Workshop on Spanish Sociolinguistics. University of Wisconsin. 3-5 April.
- 11. Beatty-Martínez, A., Berry, G.M., & Platz, R. (2014). Contrasts in code-switches at the Determiner Phrase. 7th Int'l Workshop on Spanish Sociolinguistics. University of Wisconsin. 3-5 April.

### Teaching (\*Indicates course design and instruction)

#### Villanova University

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Sociolinguistic Variation in US Spanish (SPA 3412)*	SP 2023
Fairness in Artificial Intelligence (CGS 5990)*	SP 2023
Phonetics (CGS 5990)*	FA 2022
From Latin to Spanish (SPA 3412)*	FA 2022
Introduction to Translation (SPA 3200)*	SP 2022
Sounds of Spanish (SPA 2124)*	SP 2021, 2023
Bilingualism (CGS 4000/PSY 8900) *	SP 2021, 2022
Advanced Spanish (SPA 1138) *	SP 2021, FA 2023
Linguistics as a Cognitive Science (CGS 2000) *	FA 2020, 2021, 2023
Introduction to Spanish Linguistics (SPA 3214) *	FA 2020, 2021, 2023
	SU 2021, 2022

#### **Penn State University**

Sociolinguistic Variation in US Spanish (SPAN 497)*	SP 2018
The Evolution of Spanish (SPAN 418)*	FA 2017
Elementary Intensive Spanish (SPAN 002/052)	SU 2017

Elementary Spanish 2 (SPAN 002)	SP 2013; FA 2016
Translation (SPAN 412)*	SU 2016
Intermediate Intensive Spanish (SPAN 003/053)	SU 2016
Introduction to Spanish Linguistics (SPAN 215; as TA)	SP 2015
Intermediate Spanish 3 (SPAN 003)	FA 2014
Advanced Oral Expression and Communication (SPAN 410)*	SU 2014
Spanish Phonology (SPAN 414)*	FA 2013
Introductory Intensive Spanish (SPAN 001/051)	SU 2013, 2015

## Student Advising (LUV Lab)

#### Villanova University

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Student Name	<u>Program</u>	Years (Inclusive)
Camila Pierini	Psychology	2024-Present
Rina Hanumali	Biochemistry	2024-Present
Claire Donnelly	Biology	2024-Present
Fatima Salman	Cognitive Science	2024-Present
Emma Pankuck	Psychology/Spanish	2023-Present
Valeria Ruiz	Biology	2023-Present
Mark Faverzani	Computing Science	2023-Present
Cara Scancarella	Psychology	2022-Present
Chloe Abo	Biology/Spanish	2022-Present
Sophia Gunderson	Biology	2022-2024
Jake Caselli	Cognitive Science	2022-Present
Paul Sánchez-Wangen	Business	2023
Meghan Chegwidden	Psychology	2022-2023
Bilge Koçak	Computing Science	2022-2023
Christian Schaffer	Spanish	2021-2023
Serena Matos	Spanish	2021-2023
Abigail Patchell	Cognitive Science	2020-2023
Eleanore Woodruff	Economics	2021-2022
Louis Pitingolo	Computing Science	2021-2022
Chiara Rego	Cognitive Science	2021-2022
Olivia Tigri	Cognitive Sci/Spanish	2021-2022
Daniel Winkler	Criminology/Spanish	2020-2022
Samantha Mills	Cognitive Science	2021-2021
Xin (Sophia) Tong	Computing Science	2021-2021
Siyu Lin (MS committee)	Cognitive Science	2020-2021

#### Service to the Profession

#### **Peer Review**

Education Sciences; Australian Journal of Linguistics; Languages; Language Dynamics and Change; Foreign Language Annals; Bilingualism: Language and Cognition; Attention, Perception, and Psychophysics; Laboratory Phonology; Frontiers: The Journal for Study Abroad; Language Variation and Change; Georgetown University Round Table. Language and Speech; National Science Foundation

#### Institutional Villanova University

Service

Job Search Committee (2020-2021); Department Website Administrator (2021-Present); Cognitive Science Faculty Committee (2020-Present); Diversity and Inclusion Committee (2020-2022); Assessment Committee (2020-2022); Language Science Program Curriculum Design (2020-Present); Curriculum Committee (2023-Present); Mid-term Student Satisfaction Survey (2020, 2021); Research Catalyst Grant Reviewer (2023)

The Pennsylvania State University

Curriculum Restructuring Consultant; Graduate Student Organization Executive Board (President; Secretary; Int'l Programs Liason); PSUxLing Conference Organizing Committee (Founding Member); Six-year Review Data Analyst; Recruitment Committee; Bilingualism Matters! Newsletter Editor and Bilectalism Outreach Group member

### Outreach/Media

- 1. You gotta have rizz to slay How Oxford chooses its word of the year (12/28/23) | KYW News Radio
  - https://www.audacy.com/podcast/kyw-newsradio-in-depth-0da71/episodes/you-gotta-have-rizz-to-slay-how-oxford-chooses-its-word-of-the-year-25daf
- 2. Canelo Álvarez Flexes His Business Muscle (12/07/23) | Forbes (Translation/Interpretation Assistance)
  - https://www.forbes.com/sites/brettknight/2023/12/07/canelo-alvarez-interview-boxing-champion-flexes-his-business-muscle/
- 3. Alexa, How do You Work? | Villanova Magazine (Fall 2023 Feature)
  - https://www1.villanova.edu/vu/magazine/fall-2023/features/alexa-how-do-you-work.html
- 4. Community Conversations: Sociolinguistics | Main Line Network (Public Access)
  - https://www.youtube.com/watch?v=H\_MLbfrsrWQ
- 5. Expert Wordle Tips from Villanova Linguist Dr. Grant Berry (02/02/22) | KYW News Radio
  - https://www.audacy.com/kywnewsradio/podcasts/kyw-newsradio-in-depth-229/expert-wordle-tips-from-villanova-linguist-dr-grant-berry-1229772089
- 6. So Does Elmo Have a Philly Accent? We Asked an Expert (01/21/22) | Philadelphia Magazine
  - https://www.phillymag.com/news/2022/01/21/elmo-philadelphia-accent/
- 7. Wordle: How to play (and win) like a linguist | Villanova Experts on the News
  - https://www1.villanova.edu/university/experts/spotlight-detail.html?spotlight=8313
- 8. Philly Accent: There's a lot youse don't know (02/15/19) | Philadelphia Inquirer and Daily News
  - https://www.inquirer.com/news/philadelphia/philly-accent-philadelphia-english-words-20190215.html
- 9. Newsletter contributor/editor | Bilingualism Matters! @ Penn State University
  - SU/FA 2018 letter from the Editors | https://sites.psu.edu/bilingualismmatters
  - Vowels and language variation | http://sites.psu.edu/bilingualismmatters/a-e-i-o-u-and-sometimes-y

### Membership in Academic Organizations

Acoustical Society of America; Psychonomic Society; Association for Laboratory Phonology; Linguistic Society of America; Phi Beta Kappa; Phi Kappa Phi

### **Technology & Software Proficiency**

Acoustic Analysis/Transcription PRAAT, ELAN, Audacity; FAVE; MFA

Ouant/Stats Bayesian modeling; Hierarchical regression; Factor analysis

Experimental Implementation OpenSesame, E-Prime, Mechanical Turk, JATOS

Markup Languages/Style/Programming CSS, PRAAT; Git; Bash/Z-Shell; Python (2.x-3.x)

## Language Proficiency

English Native

Spanish (ARG, ES, General Am.Lat) Near-native (C.E.L.U-Avanzado, muy bien)

Classical Latin Intermediate (reading comprehension)

Portuguese Elementary (reading comprehension)

Modern Standard Arabic Elementary (coursework)

Dutch Elementary (research experience)