

COLIN JOSEPH ARNOLD

311 S. Long St Apt 3, London, KY 40744
(606)309-1703, colin_arnold24@mymail.eku.edu

February 20, 2017
Mississippi State University
Mississippi State, MS 39762

Dr. Michael Colvin,

I am applying to the Ph.D. research position within your lab. I learned of the opportunity through the American Fisheries Society job board, and feel my qualifications are a good match for the responsibilities of the position.

I completed a Master of Science degree in Biology, with an emphasis on aquatic biology, at Eastern Kentucky University in December of 2016. This program has prepared me well for the challenges of a Doctor of Philosophy degree in Biological Sciences which I now wish to pursue. I have several years of research experience in aquatic species conservation. As a master's student at Eastern Kentucky University, I completed a thesis utilizing PIT tags to examine the movement patterns of the federally threatened Kentucky Arrow darter. It was a unique study, supported by the U.S. Fish and Wildlife Service and Kentucky Department of Fish and Wildlife Resources, utilizing a flatbed PIT tag antennae grid to investigate the movement of a small-bodied fish in a first order stream of the Kentucky River drainage. The project taught me how to adapt to challenges of field-based research and developed my quantitative and writing skills. I used Program R and ArcMap to analyze much of the large dataset associated with my thesis, gaining valuable experience in these important tools. I am currently preparing this research in a manuscript for publication. I have taken many courses I believe will prove valuable in a research position within the lab including the following: Conservation Biology, Ichthyology, Fish Biology and Management, Biostatistics, and Biogeography. I have additional experience conducting aquatic sampling, including federally threatened and endangered species and freshwater invertebrates, with the US Fish and Wildlife Services and Skybox Ecological Services. Additionally, I have experience as a lab instructor of ichthyology, clinical microbiology, and introductory biology. I also have experience as a pathways intern with the US EPA Safety, Health, and Environmental Management group at the Andrew W Breidenbach Environmental Research Center in Cincinnati, Ohio. I learned to work as part of a team responsible for safe and environmentally sound practices within the research labs. Currently, I am employed by the Kentucky Division for Air Quality as an Environmental Scientist.

I have a keen interest in conservation biology; particularly concerning aquatic ecosystems. I have a love and interest for the water and those species that dwell in it that is enduring. I hope that the skills and knowledge I obtain from a doctorate degree will, one day, allow me to seek further opportunities in academia as a research professor in a university. My ultimate goal is to complete a doctorate degree, along with a series of postdocs, to further develop my research skills and productivity as an aquatic biologist. I then hope to participate and mentor graduate students in conducting relevant research in the area of aquatic species conservation in order to preserve our aquatic environments for the enjoyment of future generations.

Attached is a copy of my résumé, references, transcripts, and GRE scores per request. If you require additional information or wish to contact me, please do so at one of the entries listed above. Thank you in advance for your consideration.

Sincerely,

Colin Arnold

Enclosure

COLIN JOSEPH ARNOLD

311 S. Long St Apt 3, London, KY 40744
(606)309-1703, colin_arnold24@mymail.eku.edu

Skills Summary:

- I have field experience in aquatic biology which I have acquired through coursework at both graduate and undergraduate levels, as well as through my thesis research.
- I am capable of sampling and identifying aquatic macroinvertebrates and fishes through training as formal graduate-level education.
- I have assisted with sampling Blackside dace with the US Fish and Wildlife services. I have also collected and identified macroinvertebrates and fishes for an aquatic survey with Skybox Ecological Services.
- I have experience analyzing ecological data using IBM SPSS and Program R during coursework and my thesis research.
- I have gained experience in microbial culture via my time as a clinical microbiology lab instructor.

Academic Education:

Master of Science (December 2016), Eastern Kentucky University, Richmond, KY 40475

- Emphasis: Biology. (GPA 3.43 on a 4.00 scale)
- Major Professor: Sherry Harrel, sherry.harrel@eku.edu
- Thesis title: “Movement patterns of the Kentucky arrow darter (*Etheostoma spilotum*), Frecklebelly darter (*Percina stictogaster*), and Southern redbelly dace (*Chrosomus erythrogaster*) in Elisha Creek, Red Bird River, Kentucky”.
- Relevant Coursework: Fish Biology and Management, Advanced Ichthyology, Conservation Biology, Biogeography, Invasive Species, Biostatistics, Science Literature and Writing, Aquatic Entomology, Ecological Field Methods, Biology and Ethics, Malacology, GIS, Remote Sensing
- Relevant Techniques Studied: Taxonomic identification of macroinvertebrates and fishes, use of a dichotomous key, fishery data analysis, water quality monitoring, aging of fishes, use of univariate and multivariate statistical analyses on ecological data, macroinvertebrate monitoring, preservation of aquatic organisms, geometric morphometric analysis, analysis of spatial and temporal patterns, population analysis

Bachelor of Science (May 2013), Eastern Kentucky University, Richmond, KY 40475

- Major: Biology. Minor: Chemistry. (139 semester hours, GPA 3.14 on a 4.00 scale)
- Relevant Coursework: Ichthyology, Ecology, Conservation of Wildlife Resources, Zoology, Principles of Biology, Herpetology, Animal Behavior, Evolution, Animal Physiology, Cell Biology, Genetics, Principles of Microbiology, Biophysical Chemistry, Applied Statistics

Diploma (May 2008), South Laurel High School, London, KY 40741

- Commonwealth Diploma Recipient

Employment History:

Environmental Scientist (October 2016-Present)

KY Division of Air Quality, London, KY 40744

\$29,129/year, 37.5 hours/week

Supervisor: Pete Rayburn

Duties:

- I perform facility reviews to ensure regulatory compliance.
- I develop and monitor Notices of Violations, corrective action orders, and other correspondences to facilities regulated by state and federal regulations.
- I prepare evaluation and inspection reports utilizing the division database.
- I respond to citizen complaints concerning activities potentially impacting air quality.

Biology Student Trainee (July 2014-June 2015)

US EPA, Cincinnati, OH 45268

\$14.07/hour, 20 hours/week

Supervisor: Stephen Musson, musson.steve@epa.gov, (513)569-7969

Duties:

- I worked on a team with Safety, Health, and Environmental Management (SHEM) to conduct annual safety inspections of laboratories and address various health, safety, and environmental concerns.
- I conducted an experiment to test alternatives to high registering mercury thermometers for use in an autoclave.
- I assisted in revising and formatting Standard Operating Procedures for the metrology lab.
- I calibrated and maintained pipettes and balances in the metrology lab.
- I learned rules and regulations dealing with safe lab and field practices through hands on experience and training.
- I developed a Health and Safety Plan (HASP) for a laboratory research project and routed it through all proper channels.

Biology Graduate Assistant (August 2013-December 2016)

Eastern Kentucky University, Richmond, KY 40475

\$10,500/year, 15 hours/week

Supervisor: Marcia Pierce, marcia.pierce@eku.edu

Duties:

- I have prepared and taught clinical microbiology, introductory biology, and ichthyology labs.
- I gathered the necessary materials, media, and equipment and prepare it to be used in the clinical microbiology lab.
- I prepared bacteria cultures and media to be used by students in the lab.
- I sterilized glassware and biological hazardous materials in an autoclave to prepare it for storage and disposal.
- I was responsible for maintaining a clean, sterile, and organized lab environment.
- I coordinated and conducted field sampling trips to various streams.
- I preserved collected fishes for specimens in museum and teaching collections.
- I coordinated with other lab instructors to plan lab experiments and present the lessons in the clinical microbiology lab.

Colin Arnold

- I assisted students in learning the materials through oral and written communication, as well as assessments and hands-on instruction.
- I used technical lab equipment such as an autoclave, colony counter, and UV light to perform various class related tasks.

Pharmacy Technician (November 2011-August 2013, July 2015-October 2016)

Walmart, Richmond, KY 40475

\$9.55/hour, 30 hours/week

Supervisor: Courtney Queen, (859)623-6802

Duties:

- I worked as part of a team to accurately and efficiently fill prescriptions.
- I trained and performed pharmaceutical hazardous material management and removal.
- I acquired knowledge of many drugs and their uses and interactions.
- I attended training on how to safely and efficiently handle workflow in the pharmacy, and planned and helped execute the implementation of a new workflow system.
- I assisted customers by answering their questions and communicating any information necessary to complete their prescription.

Technology Customer Service Specialist (June 2008-November 2011)

Office Depot, London, KY 40741

\$8.25/hour, 30 hours/week

Supervisor: Shannon Melton, (606)862-5656

Duties:

- I was responsible for troubleshooting and ensuring customer computers were in working order by repairing or replacing hardware, removing malware, installing software, diagnosing system issues, and optimizing system settings.
- I helped customers find products and apply them to meet their specific requirements.
- I maintained electronic and paper records of all computer services performed.

Job-Related Skills:

Computer Software

- I am able to use the following software: Windows Operating System (XP through Win 10), Macintosh Operating System (OS X), Linux Operating Systems, Microsoft Office 2003 and up (Excel, Word, PowerPoint, Access, Publisher, Outlook), IBM SPSS, Program R, ArcMap, QGIS.
- I am adept at using the internet to conduct research and literature review.
- I can type approximately 50 words per minute.

Technical Equipment

- I am familiar using a Smith-Root backpack shocker, seines, and gill nets.
- I have used PIT tagging equipment to insert PIT tags in fishes as well as the associated readers to track movement within a stream.
- I am able to calibrate and operate a pipette and analytical balance.
- I am able to operate and trailer a small boat.

Certifications:

Heartsaver First Aid, CPR, AED

- Completed optional child CPR and AED as well as infant CPR.

HAZWOPER 40 Hour

- Completed HAZWOPER and various other safety courses via US EPA and KY Division of Air Quality.

Volunteer/Community Service:

Hoops for Hope, Surduc, Romania (July 2006, 2007)

- I went on an international trip to help organize and conduct a basketball camp for kids of all ages in Surduc, Romania. I organized and scheduled the practice and games for one group. I also instructed and coached middle school children.

Ocoee Outreach, Cleveland, TN (June 2011-2014)

- I spent time roofing and painting homes, as well as working with children at the Boys and Girls Club, each summer from 2011-2014. I was responsible for preparing materials, coordinating with group members, and monitoring construction progress. I also helped resolve all construction issues encountered.

Camp Counselor, Corbin, KY (July 2008-2014)

- I worked as part of a team being a leader and mentor to children at Laurel River Camp. I coordinated scheduling for daily activities with other counselors.

Professional Affiliations:

American Society of Ichthyologists and Herpetologists (ASIH)

- Student Member

References

- **Sherry Harrel** – Eastern Kentucky University, Associate Professor
- (859)582-4133, sherry.harrel@eku.edu
- **Pam Martin** – US Forest Service, Fishery Biologist
- (606)344-8279, pammartin@fs.fed.us
- **Mike Floyd** – US Fish and Wildlife Service, Wildlife Biologist
- (502)695-0468, ext 102, mike_floyd@fws.gov
- **Angela Hadley** – US EPA, Laboratory Support and Accountability Staff Chief
- (513)569-7290, hadley.angela@epa.gov



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OFFICIAL TRANSCRIPT

Page: 1

Student ECU ID 901375720

Student SSN XXX-XX-9556

27-JAN-2017

Colin Joseph Arnold
112 E Main Street
Apartment 3 A
Richmond, KY 40475

Issued To: Colin Arnold

Course Level: Graduate

Degree Awarded: Master of Science 31-DEC-2016

Major : Biology

Maj/Concentration : General Biology

SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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INSTITUTION CREDIT:

Fall 2013

Biology

BIO 800	Biology and Ethics	1.00 A	4.00
BIO 810	Biostatistics	3.00 B	9.00
BIO 849	Field Methods in Ecology	3.00 B	9.00
BIO 891	Thesis Research	2.00 A	8.00

Ehrs: 9.00 GPA-Hrs: 9.00 QPts: 30.00 GPA: 3.33

Good Academic Standing

Spring 2014

Biology

BIO 761	Fish Biology & Management	3.00 A	12.00
BIO 801	Scien Lit & Writing-Biology	2.00 A	8.00
BIO 802	Advanced Ichthyology	3.00 A	12.00
BIO 806	Aquatic Entomology	3.00 B	9.00

Ehrs: 11.00 GPA-Hrs: 11.00 QPts: 41.00 GPA: 3.72

Good Academic Standing

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SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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Institution Information continued:

Fall 2014

Biology

BIO 732	Conservation Biology	3.00 B	9.00
BIO 753	Mammalogy	3.00 B	9.00
BIO 799	Malacology	1.00 C	2.00 I
BIO 816	Biogeography	3.00 B	9.00

Ehrs: 10.00 GPA-Hrs: 10.00 QPts: 29.00 GPA: 2.90

Good Academic Standing

Spring 2015

Biology

BIO 891	Thesis Research	4.00 A	16.00
BIO 891C	Continuation - Thesis Research	2.00 S	0.00

Ehrs: 6.00 GPA-Hrs: 4.00 QPts: 16.00 GPA: 4.00

Good Academic Standing

Fall 2015

Biology

BIO 725	Aquatic and Wetland Plants	0.00 W	0.00
BIO 742	Freshwater Invertebrates	3.00 B	9.00

Ehrs: 3.00 GPA-Hrs: 3.00 QPts: 9.00 GPA: 3.00

Good Academic Standing

Spring 2016

Biology

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M. Tina Davis
M. Tina Davis, University Registrar



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Page: 2

Student ECU ID 901375720

Student SSN XXX-XX-9556

27-JAN-2017

Colin Joseph Arnold
Graduate

SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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Institution Information continued:

BIO 799	Invasive Species	3.00 A	12.00 I
GEO 701	Remote Sensing for Biologist	3.00 A	12.00
Ehrs: 6.00 GPA-Hrs: 6.00 Qpts: 24.00 GPA: 4.00			

Good Academic Standing

Fall 2016

Biology

GRD 857A	MS Bio 1st Written Comp Exam	0.00 S	0.00
GRD 858A	MS Bio Oral Exam	0.00 S	0.00
Ehrs: 0.00 GPA-Hrs: 0.00 Qpts: 0.00 GPA: 0.00			

Good Academic Standing

***** TRANSCRIPT TOTALS *****

	Earned Hrs	GPA Hrs	Points	GPA
TOTAL INSTITUTION	45.00	43.00	149.00	3.46
TOTAL TRANSFER	0.00	0.00	0.00	0.00
OVERALL	45.00	43.00	149.00	3.46

***** END OF TRANSCRIPT *****





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OFFICIAL TRANSCRIPT

Page: 1

Student ECU ID 901375720

Student SSN XXX-XX-9556

27-JAN-2017

Colin Joseph Arnold
112 E Main Street
Apartment 3 A
Richmond, KY 40475

Issued To: Colin Arnold

Course Level: Undergraduate

Events: General Education Fully Cert

Degree Awarded: Bachelor of Science 31-MAY-2013

Major : Biology

Maj/Concentration : General Biology

Minor : Chemistry

SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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TRANSFER CREDIT ACCEPTED BY THE INSTITUTION:

Spring 2009	AP Credit		
ENG 101	APCREDIT: ENG101	3.00 CR	
GLY 172	APCREDIT: GLY172	3.00 CR	
HIS 202	APCREDIT: HIS202	3.00 CR	
HIS 203	APCREDIT: HIS203	3.00 CR	
HIS 231	APCREDIT: HIS231	3.00 CR	
HIS 232	APCREDIT: HIS232	3.00 CR	
Ehrs: 18.00	GPA-Hrs: 0.00	QPts: 0.00	GPA: 0.00

INSTITUTION CREDIT:

Fall 2007			
SOC 131	Introductory Sociology	3.00 A	12.00
Ehrs: 3.00	GPA-Hrs: 3.00	QPts: 12.00	GPA: 4.00

Good Academic Standing

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SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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Institution Information continued:

Spring 2008			
PHI 130	Beginning Ethics	3.00 A	12.00
Ehrs: 3.00	GPA-Hrs: 3.00	QPts: 12.00	GPA: 4.00

Good Academic Standing

Fall 2009			
ASO 100	Or/Che, Bioche, Pre-Med, Opt, Phar	1.00 A	4.00
CHE 111	General Chemistry I	3.00 A	12.00
CHE 115	General Chemistry Lab I	1.00 A	4.00
ENG 102	English Composition II	3.00 A	12.00
MAT 124	Calculus I	4.00 B	12.00
MUH 171	Music Appreciation	3.00 B	9.00
Ehrs: 15.00	GPA-Hrs: 15.00	QPts: 53.00	GPA: 3.53

Dean's List
Good Academic Standing

Spring 2010			
Chemistry			
BIO 121	Principles of Biology	4.00 A	16.00
BIO 171	Human Anatomy	3.00 B	9.00
CHE 112	General Chemistry II	3.00 A	12.00
CHE 112L	General Chemistry Lab II	1.00 A	4.00
ECO 230	Principles of Economics I	3.00 A	12.00
MUS 225	Concert Choir	1.00 A	4.00
STA 270	Applied Statistics I	3.00 C	6.00
Ehrs: 18.00	GPA-Hrs: 18.00	QPts: 63.00	GPA: 3.50

Dean's List
Good Academic Standing

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Student ECU ID 901375720

Student SSN XXX-XX-9556

27-JAN-2017

Colin Joseph Arnold
Undergraduate

SUBJ NO.	COURSE TITLE	CRED	GRD	PTS	R	SUBJ NO.	COURSE TITLE	CRED	GRD	PTS	R
Institution Information continued:						Institution Information continued:					
Fall 2010						HEA 285 Health Across the Lifespan					
Chemistry						Ehrs: 14.00 GPA-Hrs: 14.00 QPts: 42.00 GPA: 3.00					
BIO 141	General Zoology	4.00	B	12.00		Good Academic Standing					
CHE 361	Organic Chemistry I	3.00	C	6.00		Spring 2012					
CHE 361L	Organic Chemistry Lab I	1.00	B	3.00		Biology					
MUS 225	Concert Choir	1.00	A	4.00	I	BIO 348	Animal Physiology	4.00	C	8.00	
PHY 131	College Physics I	5.00	B	15.00		BIO 556	Herpetology	3.00	B	9.00	
Ehrs: 14.00 GPA-Hrs: 14.00 QPts: 40.00 GPA: 2.85						CHE 362	Organic Chemistry II	3.00	C	6.00	I
Good Academic Standing						PHY 132	College Physics II	5.00	B	15.00	I
Spring 2011						Ehrs: 15.00 GPA-Hrs: 15.00 QPts: 38.00 GPA: 2.53					
Biology						Good Academic Standing					
BIO 320	Principles of Microbiology	4.00	C	8.00		Fall 2012					
CHE 362	Organic Chemistry II	3.00	F	0.00	E	Biology					
CHE 362L	Organic Chemistry Lab II	1.00	C	2.00		BIO 316	Ecology	4.00	A	16.00	
CMS 210	Public Speaking	3.00	B	9.00		BIO 331	Cell Biology	3.00	A	12.00	
ECO 231	Principles of Macroeconomics	3.00	C	6.00		BIO 490	Biology Seminar	1.00	A	4.00	
PHY 132	College Physics II	5.00	F	0.00	E	BIO 514	Evolution	3.00	B	9.00	
Ehrs: 11.00 GPA-Hrs: 11.00 QPts: 25.00 GPA: 2.27						CHE 570	Biophysical Chemistry	4.00	C	8.00	
Good Academic Standing						Ehrs: 15.00 GPA-Hrs: 15.00 QPts: 49.00 GPA: 3.26					
Fall 2011						Good Academic Standing					
Biology						Spring 2013					
BIO 131	General Botany	4.00	B	12.00		Biology					
BIO 315	Genetics	4.00	B	12.00		BIO 317	Conserv of Wildlife Resources	3.00	A	12.00	
BIO 557	Ichthyology	3.00	B	9.00		***** CONTINUED ON PAGE 3 *****					
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Page: 3

Student ECU ID 901375720

Student SSN XXX-XX-9556

27-JAN-2017

Colin Joseph Arnold
Undergraduate

SUBJ NO.	COURSE TITLE	CRED GRD	PTS R
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Institution Information continued:

BIO 550	Animal Behavior	4.00 A	16.00
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HIS 204W	US History and Film	3.00 B	9.00
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SPA 101	Conversational Spanish I	3.00 B	9.00
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Ehrs: 13.00 GPA-Hrs: 13.00 QPts: 46.00 GPA: 3.53

Good Academic Standing

Spring 2016

Biology

GEO 353	Geographic Information Systems	3.00 A	12.00
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Ehrs: 3.00 GPA-Hrs: 3.00 QPts: 12.00 GPA: 4.00

Good Academic Standing

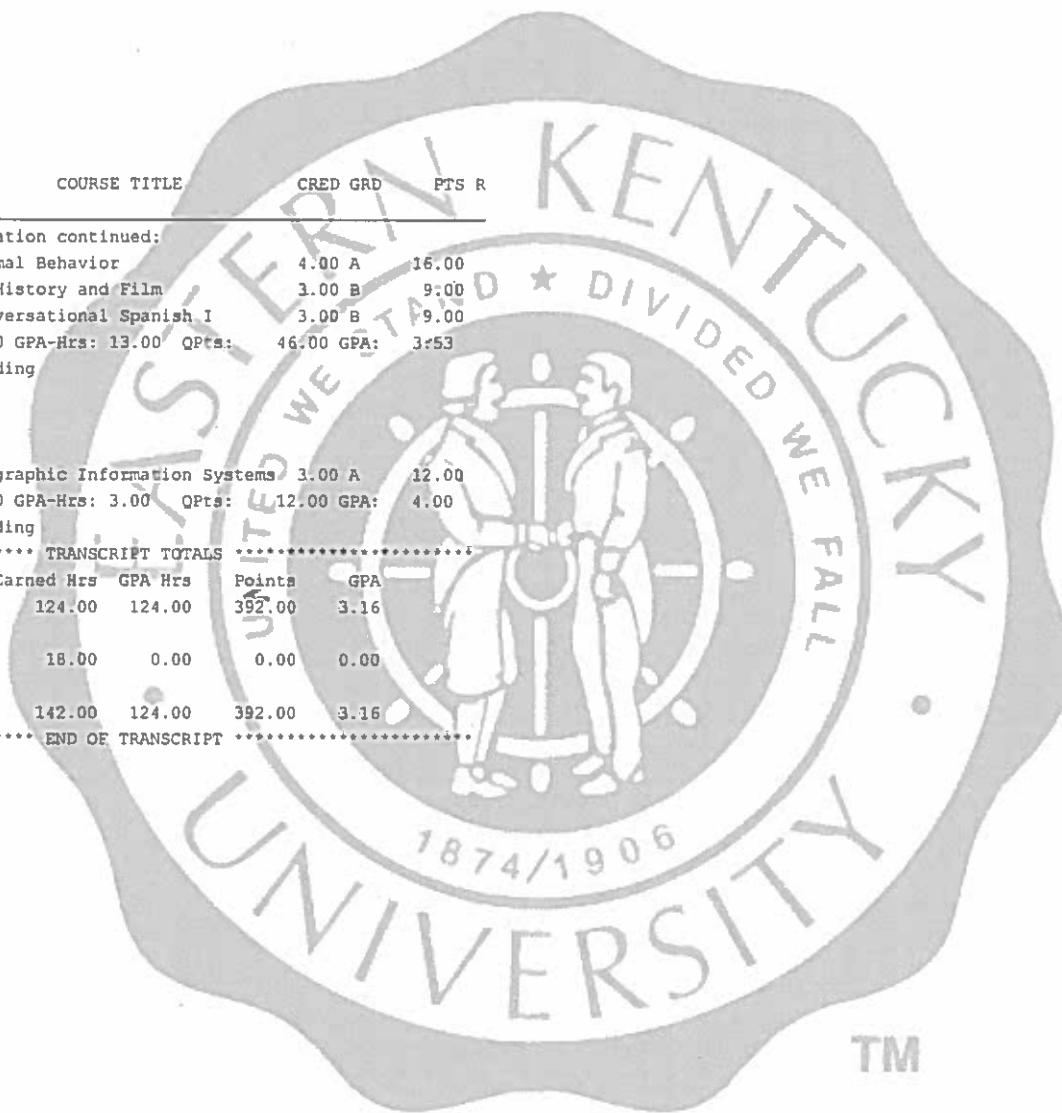
***** TRANSCRIPT TOTALS *****

	Earned Hrs	GPA Hrs	Points	GPA
TOTAL INSTITUTION	124.00	124.00	392.00	3.16

TOTAL TRANSFER	18.00	0.00	0.00	0.00
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OVERALL	142.00	124.00	392.00	3.16
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***** END OF TRANSCRIPT *****



COLIN ARNOLD

Most Recent Test Date: November 6, 2012

Address: 763 reed valley rd, london, KY, 40744 United States

Registration Number: 6774660

Print Date: September 7, 2016

Email: COLIN_ARNOLD24@MYMAIL.EKU.EDU

Phone: 1-6063091703

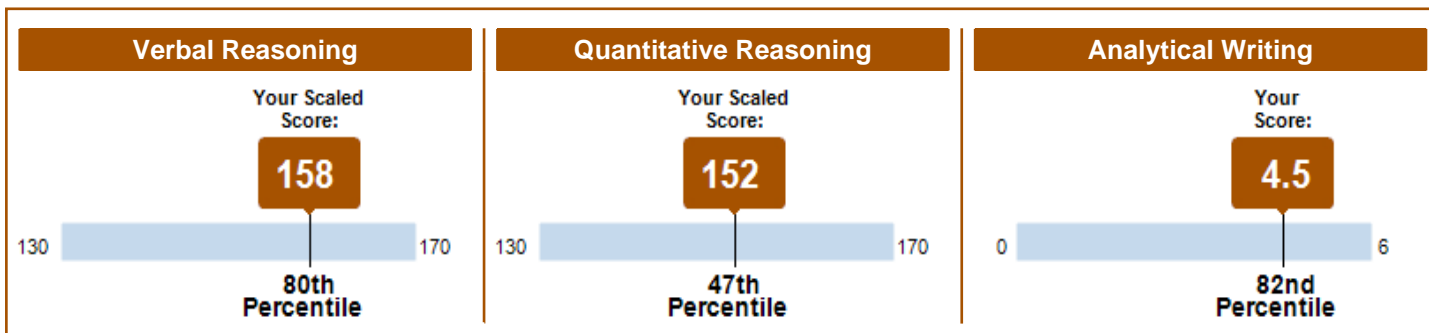
Date of Birth: July 16, 1990

Social Security Number (Last Four Digits): 9556

Gender: Male

Intended Graduate Major: Animal Biology (0223)

Your Scores for the General Test Taken on November 6, 2012



Your Test Score History

General Test Scores

Test Date	Verbal Reasoning		Quantitative Reasoning		Analytical Writing	
	Scaled Score	Percentile	Scaled Score	Percentile	Score	Percentile
November 6, 2012	158	80	152	47	4.5	82

Subject Test Scores

You do not have reportable test scores at this time.

Your Score Recipient(s)

Undergraduate Institution

Report Date	Institution (Code)	Department (Code)	Test Title	Test Date
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