

# Doctor of Arts in Mathematics

## Admission Requirements

For admission to the D.A. program in Mathematics, the applicant must meet all admission requirements of the Idaho State University Graduate School as well as the following admission requirements of the department:

1. completion of all requirements for a master's degree equivalent to the M.S. degree in Mathematics at Idaho State University before the start of the initial enrollment;
2. at least 3.5 grade point average (GPA) out of 4.0 in all previous graduate course work; and
3. at least the 67<sup>th</sup> percentile on the quantitative reasoning section and 50<sup>th</sup> percentile for the average of the percentiles on the verbal reasoning, quantitative reasoning, and analytical writing sections of the Graduate Record Examination (GRE) General Test.

In addition to completing the application procedure specified by the Graduate School, an applicant to the D.A. program in Mathematics must:

1. submit a letter addressing the applicant's reasons for pursuing the D.A. degree in Mathematics uploaded with the application to the Idaho State University Graduate School;
2. arrange for at least three confidential letters of recommendation, to be submitted within the application to the Idaho State University Graduate School, and addressing the applicant's background and potential for success in the study of advanced mathematics and teaching of college-level mathematics courses.

Applicants will be selected according to the following criteria:

1. measure of success in completing the master's degree;
2. satisfactory GRE scores (see Item 3 of the above departmental admission requirements);
3. teaching experience;
4. letters of recommendation; and
5. applicant's reasons for pursuing the D.A. degree.

An applicant who wishes to be considered for financial assistance must complete a Financial Assistance Application form and submit the completed Financial Assistance Application form directly to the Idaho State University Graduate School.

Applications for Fall semester enrollment must be received by April 1<sup>st</sup> to be given full consideration.

Applications for Spring semester enrollment must be received by November 1<sup>st</sup> to be given full consideration.

For more information about applying and admissions requirements, please visit the Graduate School Program website at: [isu.edu/graduate/](http://isu.edu/graduate/)

## Residence

Up to six credits beyond the master's degree may be transferred into the program. Two consecutive semesters of full-time study are required in residence.

## Committees and Advising

The student will be advised initially by the departmental graduate committee. This group will be the student's temporary advising committee and will assist

in the selection of the student's permanent committee which will supervise the remainder of the student's program.

## General Requirements

The program requires coursework, a thesis, teaching internships, and examinations as described below. The program must include a minimum of 48 credits beyond the master's degree and at least two 6600-level sequences taken in residence. Approval for optional courses is granted by the departmental graduate committee.

Code	Title	Credits
<b>Course Work</b>		
<b>Mathematics Component</b>		
MATH 6625	Real Analysis I	3
MATH 6626	Real Analysis II	3
MATH 6627	Complex Analysis I	3
MATH 6628	Complex Analysis II	3
MATH 6631	Abstract Algebra I	3
MATH 6632	Abstract Algebra II	3
MATH 6671	Topology I	3
MATH 6672	Topology II	3
Twelve additional 6600-level Mathematics credits, including one full-year sequence		12
<b>Interdisciplinary and Applied Mathematics Component</b>		
The following courses satisfy this requirement:		15
MATH 5550	Mathematical Statistics I	
MATH 5551	Mathematical Statistics II	
MATH 5521	Advanced Engineering Mathematics I	
MATH 5522	Advanced Engineering Mathematics II	
MATH 5541	Introduction to Numerical Analysis I	
MATH 5542	Introduction to Numerical Analysis II	
MATH 5557	Applied Regression Analysis	
MATH 5558	Experimental Design	
MATH 5559	Applied Multivariate Analysis	
MATH 5565	Partial Differential Equations	
MATH 6641	Numerical Analysis I	
MATH 6642	Numerical Analysis II	
MATH 6652	Stochastic Processes	
MATH 6653	Advanced Topics in Probability and Statistics	
MATH 6662	Differential Equations I	
MATH 6663	Differential Equations II	
MATH 6664	Methods of Applied Mathematics I	
MATH 6665	Methods of Applied Mathematics II	
Graduate courses taken in other departments may be applied toward this requirement, but such courses must contain a substantial mathematics component and be approved by the departmental graduate committee.		
<b>Education Component</b>		
MATH 6600	Introduction to College Mathematics Teaching	1

MATH 6610	Topics in College Mathematics Teaching	1
MATH 6692	Doctor of Arts Seminar	2
MATH 6693	Mathematical Exposition	1
An approved course in technical or expository writing if recommended by the departmental graduate committee in consultation with the student's permanent committee.		
<b>Doctor of Arts Thesis</b>		
	An expository research paper in mathematics or mathematics education.	6
<b>Teaching Internship</b>		
MATH 7700	Supervised Teaching Internship	6
Total Credits		68

#### Examinations

1. D.A. Written Examination: A written comprehensive examination on undergraduate-level mathematics.
2. Oral Examination: An oral examination on the four 6600-level sequences listed in the Mathematics Component.
3. Final Examination: The candidate will present to the public a lecture on the candidate's dissertation and will answer any questions that arise. Following the lecture and question period, the candidate will be examined orally by the candidate's dissertation committee on topics related to the dissertation.

## Doctor of Philosophy in Engineering and Applied Science

A doctoral program in Engineering and Applied Science, administered through the College of Science and Engineering, is available to mathematics students. The complete program description is provided in the Engineering and Applied Science (<http://coursecat.isu.edu/graduate/scienceengineering/engineeringandappliedscience/>) section of the Graduate Catalog.