Process Analysis
Graduate Admissions at University of Missouri – St. Louis

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Executive Summary

This report contains a detailed analysis of the Graduate Admissions Process at University of Missouri – St. Louis. A number of problem areas have been identified after this analysis and the report describes all of them in detail and also provides recommendations to make the process more efficient.

One main area for potential improvement is the online application. The current online application does not have a capability to send information directly to departments. Sending information directly to departments would eliminate the need of making copies of all the applications and sending them to departments by campus mail. Graduate school should encourage students to apply online. Majority of applications received currently are paper applications. Graduate school should not publicize the paper application. Also there is a need to improve the website content. To avoid late and incomplete applications there has to be accurate information on the website. A program wise checklist should be available for students to refer to all the requirements.

Another important area of improvement is to eliminate the paper workflow. A number of documents flow from one office to another. Some materials arrive at Admissions Office and they do not make any use of them except to send them to departments. These documents should either go directly to their respective departments or managed by a document imaging system.

Implementing these changes would result in an easy flow of documents, less/easy handling of documents, quicker admission decisions and savings in terms of reduced storage requirements and reduced postage.
Introduction

University of Missouri – St. Louis\(^1\)

University of Missouri, the ninth largest university in the United States, was founded in 1839. The University remained a single-campus institution until 1870 when the Rolla campus was opened. Two campuses were added in 1963. The private University of Kansas City became UM's Kansas City campus, and an entirely new campus was started in St. Louis. Today the University of Missouri – St. Louis, popularly known as UMSL, is the largest University in the St. Louis area and the third largest in Missouri. UMSL offers 46 undergraduate, 7 pre-professional, 30 Master's, and 13 Doctoral programs. There are 966 faculty members at UMSL and over 96% of them have received advanced degrees in their fields. More than 16,000 students are currently enrolled at UMSL. These students not only represent every county in the St. Louis area, but 47 states and 108 countries as well. The main UMSL campus is located in St. Louis County at One University Blvd. and has grown to over 300 acres. The most prominent feature on campus is the Millennium Student Center, which was opened in Fall 2000. The newest addition is the Blanche Touhill Performing Arts Center, which opened in Fall 2003.

U.S. News & World Report has ranked the University of Missouri – St. Louis Department of Criminology and Criminal Justice’s doctoral degree program fourth in the country. The ranking of UMSL's criminology program is the second such recognition the

\(^1\) http://www.umsl.edu
University has received in the past year. UMSL's International Business Program was ranked 10th by U.S. News & World Report in the magazine's 2005 ranking of undergraduate international business programs.

Graduate School at University of Missouri – St. Louis

The Graduate School at UMSL offers three levels of graduate programs – doctoral, master’s, and certificate. UMSL is accredited by the Higher Learning Commission of the North Central Association. This accreditation applies to all baccalaureate, masters, and doctoral levels. In addition to campus-wide accreditation, many graduate programs are accredited by their professional organizations.

Students with a bachelor's degree or the equivalent from an accredited college or university may apply for admission to the Graduate School. Students may be admitted to the Graduate School if their previous academic record and background suggest reasonable likelihood for success in their proposed programs. Students are admitted by the Dean of the Graduate School only upon recommendation of the graduate program involved.

Graduate school has two offices. One office is shared with the undergraduate admissions and is located in the Millennium Student Center (MSC). This is the central place where all the applications are received. Another office is the Dean’s office, which is located in Woods Hall. There are two full time employees in the admissions office who take care of all the application processing. Once processed at admissions office and reviewed by departments all applications go to Dean’s office for a final review.
Graduate Admissions Process

Graduate Admissions at UMSL is a complex process. An applicant is the main customer of the process who applies for admission into one of the several programs offered by the graduate school. The main role of the process is to receive the applications and make admission decision. Following is a list of all the individuals/ departments/ offices/ technologies involved in the process and their role:

1. Applicant: The main customer of the process who applies for admission in any graduate program. He/She could be a new student, returning student or an internal student who has obtained his/her undergraduate degree from UMSL.

2. Graduate Admissions Office: Located in Millennium Student Center (MSC), this office is the central place where all the applications are received, processed, and forwarded to various departments for review.

3. Student Information System (SIS): This is the main database system used in the process. It contains applicant’s personal and academic information. The information is loaded into the SIS automatically or manually.

4. Office of Registration: Located in the MSC, this office handles two important operations in the overall admissions process – 1: Loads applicant’s data into Student Information System (SIS) and 2: Receive GRE scores, read, and load them into SIS.

5. Departments: There are six main school/colleges to which students apply, which could be further divided into departments or divisions, located at different places on campus. A complete list of all the departments with
various degree programs offered by them is given in the Appendix.

Departments play key role in making an admission decision.

6. Dean’s Office: Located in Woods Hall, Dean’s office makes a final review of all applications. This office also handles administrative tasks of graduate school.

**Process Flow – Overview**

Figure 1 shows a high level flow of the overall admissions process. A detailed process map is discussed in the next section.

![Figure 1: Graduate Admissions Process Flow](image)

Applicant sends his/her application and supporting documents to Admissions Office. Admissions Office sends application and transcript(s) to Registration to load into the SIS. Once the data is loaded into SIS Admissions Office makes file for department to review. File is sent to the department. Department makes initial decision whether to
accept or reject applicant. A summary form is sent to Dean’s office for a final review. Dean reviews application and sends summary form back to Admissions Office. The final decision is loaded into the SIS and Applicant is informed of the admission decision.

**Graduate Admissions Process – Detailed Analysis**

Graduate Admissions process is divided into four sub-processes as described below. Detailed process maps of all these processes are given in the Appendix.

1. Information Request by Applicants
2. Application Submission
3. Submission of Additional Material
4. Application Processing/Decision Making

**Information Request by Applicants**

Students contact Admissions Office via phone, email, mail or walk-in to receive information and/or application packet. The College of Business, Nursing, and Department of Chemistry prefer students to contact them directly for any information. These queries are forwarded to departments.

All application material is available online. The website currently does not have ability to generate a complete packet of application based on department and program to which a student wishes to apply. Different parts of an application are available at different places to download on website. A complete information packet contains a cover letter, an application, a list of programs and material requirements, recommendation letters and specific program information.
Each department supplies their own program information to Admission Office. Different program’s information looks different. Admission Office contacts departments when supply gets low. Photocopies are made for backup.

**Information Request by Applicants – Issues and Causes**

There are only two employees in the Admissions Office to handle all the information requests and also to process the applications. Apart from any personal questions, students primarily contact Admissions Office to receive application material and to ask about requirements.

Each department supplies their own information to Admissions Office. The information booklets are sent by campus mail from departments to admissions office. Admissions Office keeps a stock of these booklets and contact departments again when their supply gets low. There have been stock out situations and Admissions Office keep photocopies for backup.

Online information is not well organized. No centralized information is available on website. Same information is available at different places in different words. A checklist is not available. Website also does not have a complete downloadable application packet.

**Application Submission**

There are primarily two ways a student can submit an application for admission – Paper or Electronic. The most common method is to send a paper application. The Applicant either downloads an application from the website or gets a paper copy from the Admissions Office. Applications are sent to Admissions Office by US Mail, Courier or
hand carried. Once an application is received on time, Admissions Office makes a copy and sends original to Registration for data entry into Student Information System (SIS).

There are two versions of online application. One application is for new students. This is People Soft based application. The other online application is for readmitted students or non-degree students. The main difference between two applications is the ability of People Soft application to load data directly into SIS. The other application does not load data directly into SIS. For this type of application Admissions Office checks the system everyday for new applications. If there are new applications in the system Admissions Office makes two copies. One copy is sent to the Registration to load data into SIS. This application could be submitted without application fee whereas People Soft application requires application fees to be paid at the time of submission.

**Application Submission – Issues and Causes**

Nearly 80% applications are paper applications. Paper applications take more time to process. The information of paper application is sent to Registration to load into the SIS. Paper applications also generate a lot of copies.

The online application for readmitted students does not have the ability to load data directly into SIS. Both online applications are not capable of sending data directly to departments.

There are also a number of late and in-complete applications. A large number of applications are received near the deadline, which makes application handling difficult and also causes delay in processing.
Submission of Additional Material

All applicants are required to provide official transcripts. Some departments also require applicants to send recommendation letters, supplemental application and/or writing samples. All material, with an exception to few departments, comes to Admissions Office first.

For transcripts Admissions Office checks SIS for a match. If there is a match transcripts are sent to Registration to load into SIS. Copies are made for Admissions Office’s use. If there is not a match in SIS transcripts are kept in holding files, which are checked against SIS as applications are received.

Recommendation letters and other materials are also kept in holding files, which are arranged program wise, and these materials are pulled out as applications are received. If applications are incomplete Admissions Office notifies students.

GRE scores are received at Registration Office on tapes. They (Registration Office staff) run these tapes and load these scores into SIS.

Submission of Additional Material – Issues and Causes

Material handling and sorting is time consuming. An application does not come complete to Admissions Office. Official transcripts come directly from other Universities which student attended. Recommendation letters also often come directly from the source to Admissions Office. All these materials reach Admissions Office at different times and managing all of this is time consuming. Different programs have different requirements and keeping track of all the requirements is again time consuming and hard.

GRE scores are sent to Registration Office directly. Late or missing GRE score is also an issue. Scores are received on tapes. Students sometimes apply without taking
GRE or they take GRE right before applying which causes a delay in receiving their (student’s) official GRE score.

**Application Processing/Decision Making**

Once the application is received and data is loaded into SIS, information is sent to Certificate Files for them to create a new file or pull an existing file, in case of a returning student. If a student applies online through People Soft a summary application is printed to put into the file. If a student applies using the other online application or applies using a paper application a copy of the application will be in the file. Admissions Office goes through the file and holding files to match any additional material. A file cannot be processed if any required material is missing.

Once an application is complete, Admissions Office types a summary form. A packet is then made for departments to review the application. The review packet consists of following documents.

1. A copy of summary form
2. A copy of the application
3. Original statement of purpose
4. A copy of transcripts
5. Original supplement material/writing samples
6. Original recommendation letters
7. Other material submitted by the applicant

Summary form contains information on what material has been sent to department and when. It is kept in the student file at Admissions Office. The file is held at office until the department makes an admission decision.
Different departments process their applications differently. Processing time and requirements vary from program to program. Some departments make panels of faculty members to review applications. Some departments also interview applicants before making an admission decision.

**Sample Decision Making Process – PhD Clinical Sciences**

The decision making process for PhD candidates is more time consuming than the Masters or Certificate programs. The clinical sciences PhD program accepts applications only for the fall semester. The deadline to receive applications is January 15. Admissions Office receives additional two weeks to send the review packets to the Psychology department. Every year approximately 110 students apply for this program. Applicants are required to send three letters of recommendation and a statement of purpose (SOP). All material goes to Admissions Office first. Once the review packets are received by department, they put information into spreadsheets. A processing schedule is made and memos are sent to all faculty members. Each applicant is assigned two faculty members. Faculty members review applications and rate them. Based on rating approximately 35 candidates are selected for a second round review. Nearly 23 candidates are selected after second round and called for interview. After interviews approximately 5 candidates are finally selected for admission. The whole process takes between 70 – 80 calendar days from the day department receives applications till the admission decision is made.

**Application Processing/Decision Making – Issues and Causes**

A lot of paper work flows from Admissions Office to departments and other offices like Registration. Also a lot of time is spent in handling and checking holding
files. For every application received holding files are checked against matching
documents. There are also a lot of papers/copies made and kept in files. A number of
duplicate documents are kept in files. The online application has limitation on statement
of purpose length. Some applicants cannot write more if they want to. On the other hand
with a paper application applicants can write more. This affects an applicant’s choice of
selecting paper versus online application.

Missing/Late GRE scores also cause delay for departments to process
applications. Out of 110 clinical science applications there are nearly 15 applications,
which are missing GRE scores.

Data Analysis

This section describes the results obtained by the statistical data analysis.

Applicant’s data for academic year 2003 – 2004 was studied and following observations
were made.

| Total number of Departments/Sub-departments | 34 |
| Total number of Masters Programs            | 30 |
| Total number of Graduate Certificates       | 25 |
| Total number of Doctoral Programs           | 13 |
| Total number of applications received in the academic year 2003 – 2004 | 7218 |
| Web Applications                           | 21% |
| Fall Applications                          | 55% |
| Winter Applications                         | 25% |
| Summer Applications                         | 20% |
| Acceptance Rate                            | 80% |
| New Students                               | 62% |
| Readmitted Students                         | 38% |
| Internal Students                           | 33% |
Figure 2 shows a Pareto Chart of Departments, based on number of applications received.

As seen from the above chart, following are some of the top departments based on average number of applications received in one academic year 2003 – 2004. Total number of applications received was 7218.

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Learning</td>
<td>1261</td>
</tr>
<tr>
<td>Business Administration</td>
<td>766</td>
</tr>
<tr>
<td>Arts and Science</td>
<td>748</td>
</tr>
<tr>
<td>Education</td>
<td>618</td>
</tr>
<tr>
<td>Counseling</td>
<td>518</td>
</tr>
</tbody>
</table>
Figure 3 shows a Pareto Chart of processing time based on programs.

Following is a list of some top programs based on average processing time. This is the total average time taken to process an application, which also includes time an application spends at Admissions Office.

<table>
<thead>
<tr>
<th>Program</th>
<th>Processing Time (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>58</td>
</tr>
<tr>
<td>Criminology &amp; Criminal Justice</td>
<td>52</td>
</tr>
<tr>
<td>Biology</td>
<td>50</td>
</tr>
<tr>
<td>Political Science</td>
<td>47</td>
</tr>
<tr>
<td>Social Work</td>
<td>43</td>
</tr>
<tr>
<td>Art &amp; Art History</td>
<td>40</td>
</tr>
</tbody>
</table>
**Current Process vs. an Ideal Admissions Process**

Following table shows a comparison between the current process and an ideal admissions process.

<table>
<thead>
<tr>
<th>Ideal Admissions Process</th>
<th>Current Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only one type of application is processed. If different types of applications, they are not processed differently and they all have same material requirements.</td>
<td>Different programs have different requirements but handling (at Admissions Office) is similar for almost all applications.</td>
</tr>
<tr>
<td>Arrival of applications is spread evenly.</td>
<td>Most applications are received near deadlines.</td>
</tr>
<tr>
<td>All applications are received electronically, loaded directly into SIS. No paper copies are made of online applications.</td>
<td>Only 21% online applications. Online applications are printed and sent to departments just like other paper applications.</td>
</tr>
<tr>
<td>No duplication of documents.</td>
<td>Copies are made at various stages.</td>
</tr>
<tr>
<td>Processing time is same for all applications.</td>
<td>Different departments have different processing times. Admissions Office also take different time to process depending on how accurate/complete the application is and when is it received.</td>
</tr>
<tr>
<td>All office supplies/information required to process applications is available, accurate and only in quantities required.</td>
<td>Departments send information to Admissions Office in advance. There have been stock outs of information packets.</td>
</tr>
<tr>
<td>Only those documents required at Admissions Office are sent to them. All other documents are sent directly to departments without going through Admissions Office.</td>
<td>All documents are received at Admissions Office. Recommendation letters, SOPs, Writing samples reach departments via Admissions Office and Admissions Office do not make any use them.</td>
</tr>
<tr>
<td>All applications are received on time and accurate.</td>
<td>A large number of in-complete and late applications are received.</td>
</tr>
</tbody>
</table>
Recommendations

Based on the analysis following is a list of recommendations. Also listed with some recommendations are issues or constraints to implement them.

1. **Elimination of Paper Application:** Applicants should be encouraged to use the online application. Paper application should not be publicized. There should be only one type of online application with an ability to load data directly into SIS. The operation of loading data manually into the SIS should be omitted. After the application is submitted electronically it should be available centrally for access to all the departments. No paper copies should be made of application or any other material.

   a. **Issue:** Can University or Admissions Office handle all online applications? A “true” online application is the one, which is available centrally to all concerned people, and no paper copy of it is made at any time.

2. **Elimination of Duplication:** All application material should be sent to departments directly. Transcripts could be handled differently. Either department should have ability to load transcripts data into SIS or transcripts should be sent to Registration after department has kept a copy. This would not delay processing. By the time department has processed application transcripts data would be loaded into SIS. Another way of handling transcript could be to postpone the operation of entering transcripts data until the end when admissions decision has been made.
3. **Easy Handling/Sorting of Documents:** If all application material were sent directly to departments, handling/sorting would become easy, as departments would handle only documents specific to their departments. At present, Admissions Office receives a large volume of documents and keeps them in different holding files, some of which are arranged program wise and some arranged by name. Admissions Office does not use some documents at all and they are simply forwarded to departments.

   a. **Issue:** Can department take responsibility of handling all application material, if sent to them directly? Can admissions office process the applications with unofficial transcripts and validate them at a later stage?

4. **Improved website information:** There should be only one centralized place to receive online information. To reduce the number of incomplete applications there should be a checklist available online based on program. Online application should be modified to have more space for writing statement of purpose and to have an ability to submit application with an option to pay fees by check or other means later.

5. **Unofficial GRE Scores:** Applicants should be required to send their unofficial GRE scores. This would speed up the processing and scores could be verified at a later stage.

   a. **Issue:** Can departments process the applications without official GRE scores and verify them at a later stage when decision has been made? This way only admitted students score need to be verified instead of collecting score of all applicants.
6. **Document Imaging and Management System:** Document management is the conversion of paper documents into electronic images on your computer. Once on your desktop, these documents can be retrieved effortlessly in seconds. Thousands of organizations around the world use document management every day instead of paper filing systems. The reasons for this change are simple:

- Prevent lost records
- Save storage space
- Manage records easily
- Finds document quickly
- Make images centrally available
- Eliminate the need for file cabinets

Documents are scanned into the system. The document management system stores them somewhere on a hard drive or optical disk. The documents then get indexed. When a person later wants to read a document, he or she uses the retrieval tools available in the document management system. Which documents can be read and what actions performed on these documents is dependent on the access provided by the document management system.

A complete document management system comprises five elements:

- **Scanning**

  Major advancements in scanning technology make paper document conversion fast, inexpensive and easy. A good scanner will make putting paper files into your computer easy.
• **Storage**

The storage system provides long-term and reliable storage for documents. A good storage system will accommodate changing documents, growing volumes and advancing technology.

• **Indexing**

The index system creates an organized document filing system and makes future retrieval simple and efficient. A good indexing system will make existing procedures and systems more effective.

• **Retrieval**

The retrieval system uses information about the documents, including index and text, to find images stored in the system. A good retrieval system will make finding the right documents fast and easy.

• **Access**

Document viewing should be readily available to those who need it, with the flexibility to control access to system. A good access system will make documents viewable to authorized personnel, whether in the office, at different locations, or over the Internet.

**Conclusion**

The Graduate Admissions Process at University of Missouri – St. Louis is a complex process. It involves a number of departments and offices. The main role of the process is to receive admission applications and produce a decision. The process was analyzed in a great detail and a number of observations were made which are explained in this report.
As a result of the analysis this is concluded that there are a number of opportunities to streamline the process. The most significant of them is the need of an improved online application. The current online application is processed in a similar way as the paper application, which should not be the case. The improved online application should have the ability to upload data automatically into SIS and also should be available to departments for review.

Another important opportunity is to improve the workflow. A lot of paper work flows from one office to another. There is a need to improve the workflow in a way that all the material reaches where it intends to reach at the first place, without going through intermediate departments.
Appendix

Pareto Chart – Number of Applications

Top 10 Dept. - No. of Applications (Total Applications = 7218)
Pareto Chart – Processing Time

Total Processing Time
(Including Admissions Office)

PSYCHOLOGY
CRIMINOLOGY AND CRIMINAL JUSTICE
BIOLOGY
POLITICAL SCIENCE
SOCIAL WORK
ART AND ART HISTORY
PHYSICS AND ASTRONOMY
OPTOMETRY
CHEMISTRY & BIOCHEMISTRY
HISTORY
PHILOSOPHY
SOCIOLOGY
MATHEMATICS AND COMPUTER SCIENCE
INTRADIVISIONAL - BUSINESS ADMINISTRATION
ENGLISH
NURSING (SCHOOL)
ECONOMICS
COUNSELING
FINE ARTS
GRADUATE SCHOOL-PPA
INTERDEPARTMENTAL - ARTS & SCIENCE
BUSINESS ADMINISTRATION (SCHOOL)
FOREIGN LANGUAGES AND LITERATURE
Process Map – Submission of Additional Material

Graduate Admission Process – Application Material Handling

1. Applicant
   - Submit Transcripts/Recommendation Letters/Other Material

2. Graduate Admissions
   - Transcripts?
     - Yes: Match in SIS?
       - Yes: Make Copies → To Registration
       - No: Other Material
         → To Tracking File: Check against SS as applications are received
     - No: Other Material

3. Registration
   - Receive Transcript
   - Manual → SIS
List of Programs and Requirements

* Review Packet contains: Copy of Summary Form, Copy of Application (Summary if people soft), Original Statement of Purpose, Copy of Transcripts, Original Supplement Material, Original Recommendations, Other Documents