

TRANSPORTATION INTERDISCIPLINARY
GRADUATE PROGRAM HANDBOOK

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I. Introduction

Interdisciplinary M.S. degree in Transportation

Iowa State University's Master of Science degree in transportation is one of only a few truly interdisciplinary transportation degrees nationwide. It includes three core fields: Transportation Engineering (through the Department of Civil, Construction, and Environmental Engineering), Community and Regional Planning (through the College of Design), and Logistics, Operations and Management Information Systems (through the College of Business). Up to date information about the M.S. Degree in Transportation and many excellent student resources may be found at <http://www.ctre.iastate.edu/mstrans/>.

Students develop a cohesive curriculum from the three core fields and related fields such as economics, political science, industrial engineering, sociology, and other disciplines. The degree program has a minimum of core requirements and, under the direction of an advisor, students design a program to meet their academic and career objectives.

The Transportation degree program is a select program that accepts only the most qualified students. The degree is research oriented, requiring students to develop a thesis (or a creative component) based on their research interests and self-designed program of courses. The number of students is limited to ensure all students have an opportunity to work closely with a faculty member on research. The Center for Transportation Research and Education enhances student research opportunities by sponsoring student work on research projects.

Past and current students in Transportation have had backgrounds as varied as the program itself. These students have had bachelor degrees in Business Administration, Engineering Science, Mechanical Engineering, Sociology, Political Science, Industrial Engineering, Urban Planning, and Civil Engineering. Because transportation is inherently interdisciplinary, the perspective of many disciplines is needed to solve the complex transportation questions facing the next generation of transportation professionals. The diversity of students and faculty participating in the Transportation program enriches the academic experience and allows the student to see the strength of interdisciplinary approaches to planning, operating, managing and maintaining the next generation of transportation systems.

A degree in Transportation can support careers in:

- Transportation Policy Analysis
- Transit Planning and Operations
- Urban and Statewide Transportation Planning
- Carrier and Shipper Transportation Analysis
- Transportation and Development Economic Analysis
- Federal and State Transportation Strategic Planning
- Transportation Planning and Engineering Consulting
- Transportation Systems Management

Additional information about the interdisciplinary Transportation program is available at <http://www.ctre.iastate.edu/mstrans/>.

Transportation Interdisciplinary MS Program Department and Faculty Information

Administration and Contact Information

Dr. Nadia Gkritza, Chair
Iowa State University
450 Town Engineering
Ames, IA 50011-3232
Phone: 515-294-2343 Fax: 515-294-7424
E-Mail: nadia@iastate.edu

Participating Departments

Civil, Construction, and Environmental Engineering, College of Engineering

Contact:

Dr. Nadia Gkritza
450 Town Engineering
Ames, IA 50011-3232
Phone: 515-294-2343 Fax: 515-294-7424
E-Mail: nadia@iastate.edu

Community and Regional Planning, College of Design

Contact:

Dr. Doug Johnston
Iowa State University
146 Design
Ames, IA 50011
Phone: 515-294-5676 Fax: 515-294-2348
Email: dmjohnst@iastate.edu

Logistics, Operations, and Management Information Systems, College of Business

Contact:

Dr. Mike Crum
Iowa State University
2200 Gerdin Business Building
Phone: 515-294-8105 Fax: 515-294-6060
Email: mcrum@iastate.edu

Transportation Faculty

Civil, Construction, and Environmental Engineering - 394 Town Engineering Building

- Nadia Gkritza
- Shauna Hallmark
- Tom Maze
- Shashi Nambisan
- Reginald Souleyrette
- Omar Smadi

Community and Regional Planning - 146 College of Design

- Carlton Basmajian
- Timothy Borich
- Susan Bradbury
- Tara Lynne Clapp
- Doug Johnston
- Riad Mahayni
- Francis Owusu
- Gary Taylor

Logistics, Operations, and Management Information Systems - 2340 Gerdin Business Building

- Michael Crum
- Bobby Martens
- Richard Poist, Jr.
- Yoshinori Suzuki
- Clyde Walter

II. Arrival at Iowa State

Important Tasks Following Arrival at ISU

Upon arrival at Iowa State, a student will need to complete a number of activities. The following are some of the most important tasks that should be attended to:

- **Visit the Center for Transportation Research and Education (CTRE).** This will allow for an introduction to the faculty, staff and students at CTRE.
- **Obtain an ISU Card.** Obtain your ISUCard (student i.d.) from the ISUCard Office in 0530 Beardshear Hall. If this is your first card, you will need a picture ID to verify who you are. An ISUCard must be obtained before you can open an email account.
- **Create an email account.** Register for email at the Durham Computational Center (195 Durham Center) and check it daily. Email is the most commonly used means of communication for many professors to communicate to their students.
- **Read this handbook.** This handbook contains detailed instructions and tips to make your transition as a graduate student at Iowa State University as smooth as possible.
- **Become familiar with your home department.** It is recommended that incoming students become familiar with their home department (CCEE, CRP, or LOMIS) and specifically, the location of the department's offices. Students will be required to visit these offices throughout the course of their studies to file paperwork.

Useful Websites for Reference Information

Below are some useful websites for reference information. Become familiar with them.

Graduate College Handbook

<http://www.grad-college.iastate.edu/publications/gchandbook/homepage.html>

Graduate Orientation Handbook

<http://www.grad-college.iastate.edu/gpss/> (look for the listing on this website)

Graduate Thesis/Dissertation Website

<http://www.grad-college.iastate.edu/thesis/homepage.html>

Graduate College forms are available on the Internet at:

<http://www.grad-college.iastate.edu/forms/forms.html>

Some Graduate College forms are 4-part carbon forms and are not available on the website. Check with your director of graduate education (DOGE) or graduate secretary.

General Course Catalog - <http://www.public.iastate.edu/~catalog/>

Copies of the catalogs also are available in the ISU Admissions Office, 100 Alumni Hall.

Schedule of Classes - <http://classes.iastate.edu/>

Copies of the Schedule of Classes are issued for each semester and can be purchased at the University Bookstore, Memorial Union.

AccessPlus - <https://accessplus.iastate.edu/frontdoor/login.jsp>

Iowa State University's AccessPlus is a personalized secure university information resource that provides on-demand accessibility to your confidential information. Check to see what information is available.

Iowa State University Phone/Email Directory - www.adp.iastate.edu/cgi-bin/phf

The University phonebook is printed each fall and copies can be purchased at the University Bookstore, Memorial Union. The phonebook directory includes a two-year calendar of academic dates and deadlines. The online directory is updated regularly throughout the year.

III. The First Year

New Transportation students are admitted to the program in one of two categories:

- *First year students*
- *Current ISU students admitted to Transportation as "concurrent degree candidates"*

In either case, students admitted into the Transportation program spend their first year doing research work, taking classes, choosing a major professor, establishing a Program of Study Committee, and working on a proposal for a thesis (or a creative component). The major professor and the POS Committee help the student choose courses to fulfill the program requirements.

Graduate Student Orientation

For new graduate students, the academic year begins with a Graduate Student Orientation offered by the Graduate College. Incoming graduate students will receive information concerning this orientation in the weeks preceding the start of classes. This is a time to become acquainted with the University, its policies, and requirements. This is also a time for incoming students to familiarize themselves the Transportation program, its faculty, students, and to prepare for registration and the start of classes.

Registration for Classes

During their first weeks at ISU, before classes begin, it is advisable for a student to meet with a professor that is familiar with the Transportation program for counseling and preparation of a class schedule for the upcoming semester. Log on to AccessPlus <https://accessplus.iastate.edu/frontdoor/login.jsp> and select the Register for Classes option. This will allow the student to register for classes for the upcoming semester.

Choosing a Major Professor

A major professor (advisor) should be selected during the first semester. Typically the faculty directing the student's research should be their major professor. Many incoming students will be appointed to a potential research project based on their perceived research interest, and the faculty directing that project may act as a temporary major professor. After becoming familiar with the faculty in their major department and participating departments, students are free to contact potential major professors to discuss the possibility of performing their research work under them. The student's temporary major professor should be informed of any change being made, prior to the end of the first semester. Roles and responsibilities for students and their major professors are clearly outlined in the Graduate College Handbook (online).

Note: Selection of the research supervisor as major professor (or at least co-major professor) facilitates streamlining the thesis (or a creative component) and project research to develop synergies between the two major activities. Research work is over and above the minimum 20 hours per week commitment for a ½ time RA. However, with approval of the major professor and research supervisor, some overlap is allowed.

Appointing a Program of Study (POS) Committee

After choosing the major professor and establishing a home department, students should begin planning a suitable program for completion of graduate course work. Before the end of the first semester, students should appoint a graduate Program of Study (POS) Committee by filing a *Recommendation for Committee Appointment* form. This form is found at

<http://www.grad-college.iastate.edu/forms/forms.html>. The composition and responsibilities of the POS committee must be in accordance with the Graduate College guidelines.

The POS committee should include faculty whose knowledge and research interests can aid and complement the student's research interests, as well as faculty whose expertise will ensure that a breadth of knowledge on the committee. For MS candidates, the POS committee must consist of at least three members of the Graduate Faculty. The major professor need not be a member of the student's home department. At least one member of the committee must be from outside the student's home department.

After the chosen members of the POS committee have agreed to serve, students should complete the *Recommendation for Committee Appointment* form, obtain the necessary signatures from prospective committee members, and submit it to the Graduate College for approval. On the form, under "Major," indicate: "Transportation." After official approval of the POS committee, copies of the form will be returned to the student and major professor.

IV. Academic Matters

Academic Calendar

The Transportation graduate program is a year-round program that includes fall, spring, and summer semesters. Students are expected to be registered and to participate in research and courses twelve months per year. Each student must obtain the required approval and notify the major professor and their supervisor prior to taking leave over periods that will interfere with the performance of normal duties.

Research Expectations

Transportation students are expected to develop an independent and creative approach to research through an interdisciplinary curriculum and research training from projects. From this education, students are expected to develop a 6 credit thesis or a 2-3 credit creative component.

A master's thesis is a scholarly composition that demonstrates the ability of the author to do independent and creative work. It explores in some depth a problem or issue related to the major field of study. From the master's level thesis, it is expected that at least one original manuscript can be derived from the research for scholarly publication. Publication occurs at three levels: Journal level, Fully Refereed Conference paper, and Abstract Only Review of a paper/presentation/poster. Of these three levels, Journal publications are the highest and most desirable form of publication.

With a creative component, students apply the theory, methods and tools they learned to study a real-world transportation problem and produce a professional report. The creative component might draw from the experience in previous classes, but it should not be simply a revision of the earlier course work. Students selecting the creative component option must complete additional 2-3 credits of graduate level coursework in order to meet the 36-credit requirement.

A key determining factor between the thesis and the creative component option would be the student's professional goals. The final choice should be made after careful reflection as well as consultation with the POS committee. The role of the POS Committee is the same for the thesis option and the creative component option.

Background Coursework

All graduate students entering the Transportation program are expected to have a solid undergraduate background that can contribute to their transportation education. Students who have successfully completed the transportation program have had backgrounds in Business Administration, Engineering Science, Mechanical Engineering, Sociology, Political Science, Industrial Engineering, Urban Planning, and Civil Engineering. These are not prerequisite areas of undergraduate study; rather, they are a sampling of previous student's backgrounds.

Degree Requirements

A student must complete at least 36 credit hours of acceptable work including preparation of a 6 credit thesis or a 2-3 credit creative component. Three core courses and two courses from outside your admitting (home) department, one from each of the other cooperating departments, are required of all students majoring in transportation.

Required Core Courses and Other Required Courses

STAT 401 - Statistical Methods for Research Workers (4 credits)

CE 551 - Urban Transportation Planning (3 credits)

TRANS 599 - Creative Component (2-3 credits) or TRANS 699 - Thesis Research (6 credits)
 TRANS 691 - Seminar in Transportation Planning (3 credits)

Advanced Group Requirements

In addition to the core degree requirements, students are required to take at least one course from each participating department (total of 6 credit hours). Students must also complete an additional 18 credit hours of coursework that is uniquely designed for the student. The courses available from each of the participating departments include (other courses may be approved by the POS):

Civil Engineering	Credits
C E 453. Highway Design (counts for non-CE's only for grad credit)	4
C E 524. Air Pollution	3
C E 550. Advanced Highway Design	3
C E 552. Traffic Safety, Operations, and Maintenance	3
C E 553. Traffic Engineering	3
C E 555. Advanced Traffic Engineering	3
C E 556. Transportation Data Analysis	3
C E 557. Transportation Systems Analysis	3
C E 558. Transportation Systems Development and Management Lab	3
C E 559. Transportation Infrastructure/Asset Management	3
TRANS 555. Economic Analysis of Transportation Investments	3
Community Regional Planning	
C R P 511. Introduction to Community and Regional Planning	3
C R P 521. Land Use Planning	3
C R P 525. Growth Management	3
C R P 542. Site Development	3
C R P 545. Transportation Policy Planning	3
C R P 551. Introduction to Geographic Information Systems	3
C R P 552. Geographic Data Management and Planning Analysis	3
C R P 553. Analytical Planning/GIS	3
C R P 590. Special Topics: I. Land Use and Transp. Plan	1-3
C R P 592. Land Use and Development Regulation Law	3
Transportation and Logistics	
LSCM 461. Principles of Transportation	3
LSCM 462. Transportation Carrier Management	3
LSCM 466. International Transportation and Logistics	3
SCM 560. Strategic Logistics Management	3
SCM 561. Transportation Management and Policy	3

Note: Each course is not taught every semester. Please consult the ISU course catalog to determine course availability. New courses may be added periodically, or courses modified or dropped. Check with the POS Committee for the applicability of a course not on this list.

Note: Because of accreditation issues, students enrolled from outside the LOMIS department must obtain a graduate prerequisite waiver form from the LOMIS graduate office in 1360 Gerdin

Business Building, 294-8118. It is recommended that this form be completed as soon as possible following registration for a class.

After the First Year

- Students should fulfill remaining credit hours of coursework (summer and fall).
- Establish the direction of their research (thesis or creative component).
- Complete research and composition (final semester)

Note: It is advisable for students to complete all required coursework before their final semester. This allows for 6 thesis credits or 2-3 creative component credits to be taken during the final semester without the distraction of additional coursework.

Required Seminars and Activities

Seminars

- TRANS 691 Seminar in Transportation Planning (3 Cr Hrs). When students are enrolled in the Transportation Seminar, they are expected to attend all weekly presentations. Students who have already completed the seminar are still strongly encouraged to attend in order to gain added exposure to the full breadth of transportation problems and career opportunities which exist.

Additional Activities

- In addition to seminar attendance, students are expected to write and submit one paper for the annual Midwest Transportation Consortium Scholars Conference, held each fall.
- Students enrolled in Transportation are expected (but not required) to be active in the Transportation Student Association (TSA). TSA is a student organization which undertakes many activities to further enhance the overall education of students enrolled in various transportation-related disciplines. More information about TSA can be found at: www.ctre.iastate.edu/transa/.

Graduate College Grade Requirements

A cumulative GPA of at least 3.0 is required by the Graduate College for ½ time tuition supported assistantship by the Graduate College. The grading scale at ISU is as follows: A (4.0), A- (3.67), B+ (3.33), B (3.0), B- (2.67), C+ (2.33), C (2.0), C- (1.67), D+ (1.33), D (1), and F (0). Research grades (699, 697) do not count toward the GPA.

Graduate English Requirements

Native Speakers of English

Iowa State does not test native English speakers for English skills. Use of the English language is expected to improve for all students as they progress toward their degrees. Students are expected to seek out opportunities for oral and written presentations and if needed, to take formal coursework in these areas.

Non-Native Speakers of English

Non-native English speakers who do not have a bachelor's degree or advanced degree from ISU or a US institution are required to take the English Placement test their first semester at Iowa State. This test is administered by the English department. For more information, contact the ESL secretary in the English department at 515-294-3568. Students receiving low scores on this test are

assigned to appropriate sections of English 99 and 101, which should be completed during the first year of graduate study.

In addition, non-native English speakers who wish to teach at ISU must take the SPEAK/TEACH tests before beginning their teaching duties (see more information about [English Requirements](#)). Students with low scores on SPEAK/TEACH are required to enroll in the appropriate sections of University Studies/English 180 if their teaching responsibilities will involve interaction with undergraduates.

A graduate student whose native language is not English but did graduate from a U.S. institution, may bring to the Graduate College the “Request for the Graduate College to Approve the Graduate English Requirement for a Student Whose Native Language is NOT English” form, available on the Graduate College’s forms website. Two conditions must be met: the student must have received a bachelor’s, master’s, or Ph.D. degree from a U.S. college or university and the language of instruction at that college or university must have been in English.

Participation in Domestic and International Conferences and Symposia

Attendance and presentation of research results at professional meetings is an essential part of the Transportation graduate program. Students should attend at least one national or international meeting during their degree program. It is preferred that students attend conferences to present the results of their research, as well as to obtain knowledge and insights pertinent to their thesis (or creative component) research. Travel funding cannot be guaranteed, but several sources of funds are available for students. For additional information, see *Professional Advancement Grants (PAGs) for Travel* in Section VII. *Financial Matters*.

Transferability of Credits from Other Institutions

The transferability of credits from other institutions will be determined on a case-by- case basis by the student’s POS committee and the Transportation Chair. To waive a course requirement, the student must send a memo signed by his or her major professor (on behalf of the POS committee) and the instructor of the course the student wishes to waive, to the Transportation Chair. The memo must state that the student has already received satisfactory instruction in the subject matter covered by the required course. Credits for seminars, workshops and colloquia are not transferable.

Graduate Minor

A graduate minor in Transportation requires:

- Completion of Trans 691 Seminar (3 credits)
- Completion of at least 9 credits in courses listed under Advanced Group Requirements, including at least 6 credits from one subject area and 3 credits from another area. The selected courses must be approved by the Program of Study Committee.
- Completion of a thesis or creative component on a transportation related topic.
- The planned POS must be reviewed by the Transportation Chair prior to POS committee approval.
- At least one member of the POS committee must be a Transportation faculty member.
- Application for a minor must be made prior to PhD preliminary examination (if applicable).

V. Completing the Degree Program

Deadlines and Program Checklist

The Graduate College sets certain deadlines which must be met to successfully obtain a degree during a specific semester. Students are strongly encouraged to learn and make note of these dates during their planned semester of graduation. This information can be found at: <http://www.grad-college.iastate.edu/deadline/deadlines.html>.

The *Transportation Program Requirements Checklist*, included at the end of this document, summarizes the requirements of the Transportation program, and provides a timetable for completion of degree requirements. Requirements for the M.S. degree established by the ISU Graduate College are summarized in the *ISU Graduate College Handbook*, available on the web at: <http://www.grad-college.iastate.edu/publications/gchandbook/homepage.html>.

Generally, two years is the required timeframe for the completion of the Transportation degree. Degree fulfillment may take longer due to extenuating circumstances (e.g. data collection outside of student's control taking longer than expected).

The forms listed in this section can be found on the web at: <http://www.grad-college.iastate.edu/forms/forms.html>.

First Year Activities

Activities completed during a student's first year in the Transportation program are described in *Section III. The First Year*.

POS Committee Meeting

During the first semester the student will have chosen a major professor and established a POS committee. **Note:** The POS committee should meet to discuss the *Program of Study* prior to the student choosing second semester classes.

Approval of the Program of Study (POS)

After choosing major professor and establishing a POS committee, students must file a *Program of Study* form. The Graduate College *Program of Study* form serves as a contract between the student and the Graduate College, indicating the minimum coursework that must be completed for the M.S. degree. *No changes can be made in the POS without approval of the POS committee and Graduate College.* The student should prepare a draft *Program of Study* form in consultation with the major professor.

Important: *The student and major professor should refer to the Transportation course requirements to ensure that the planned coursework: 1) meets all Transportation requirements, 2) meets all Graduate College requirements, and 3) is appropriate, based on the student's planned thesis (or creative component) research. The POS committee will approve the POS form if these conditions are met. If courses listed on the POS form do not meet all Transportation course requirements, the POS form will NOT be approved by the program chair (unless a memo of justification is provided by the POS committee).*

Thesis/Creative Component Proposal Meeting

A thesis (or creative component) proposal should be written summarizing the major objectives of the research project and planned approaches to achieve these objectives. The thesis (or creative component) proposal should include:

- Problem statement
- Background
- Research methodology
- Expected results

Students should be prepared to make an oral presentation at the first POS committee meeting. Typically, the student describes the proposed research and solicits input from committee members. The POS committee is responsible for ensuring that the proposed research is appropriate and comprehensive. After the proposal meeting (within one month), the student is to prepare a written proposal to be approved by the major professor. This proposal should be completed at least five months prior to submission of thesis (or creative component) to committee for review.

Scheduling Committee Meetings

Students will be required to schedule three POS committee meetings throughout their academic career.

Meeting #1: Program of Study: Before selection of second semester classes is best for the student. This meeting must be scheduled no later than the end of the second semester. Student should prepare a draft POS form and bring copies to the meeting. The student should also select a thesis (or creative component) topic prior to this meeting (in consultation with the major professor). Students should be prepared to make a brief oral presentation at the first POS committee meeting.

Typically, the student describes his or her academic background (undergraduate institution, previous degrees, research experience, research interests, career goals) during the first few minutes of the meeting. The student then briefly summarizes the proposed research and solicits input from committee members. The POS committee is responsible for ensuring that the proposed research project is interdisciplinary. In addition, the POS committee is responsible for ensuring that the POS coursework: 1) meets all Transportation MS requirements, 2) meets all Graduate College requirements, and 3) is appropriate, based on the student's planned research project.

If no changes in the proposed POS are required, the meeting concludes with members of the committee signing the POS form. If changes are required, the student must modify the form and obtain signatures of POS committee members as soon as possible after the meeting. Immediately after the POS committee signatures are obtained, the student must submit the completed and signed POS form to the Graduate College. See "Approval of POS," above.

Meeting #2: Proposal: This meeting must be scheduled no later than 6 months prior to submission of thesis (or creative component) to committee for review. The student should prepare a power point (or similar) slide presentation and be prepared to consider major changes in direction as suggested by the committee. The student should realize that a major benefit of having a thesis (or creative component) committee is the interaction of that committee as they consider the student's proposal. The committee will help the student identify sound research methods and limit the scope to a reasonable level. See "Thesis/Creative Component Proposal Meeting," above.

Meeting #3: Final Defense: A **minimum** of two weeks prior to this meeting, the full committee must receive a complete copy of the thesis (or creative component) for review. The major professor must be given a complete copy of the thesis (or creative component) at least one month prior to this meeting. See “Final Examination,” below.

Arranging Committee Meetings

Professors have busy schedules, and arranging for all POS members to be in the same place at the same time can be a daunting task. The following are some of the Do’s and Don’ts of arranging committee meetings.

The Wrong Way to arrange your committee meeting

Many students begin by picking a time which is convenient for them and then checking to see whether other POS members are free at that time. Usually members cannot make it at this time. Several rounds of phone calls and/or emails ensue until a suitable time is found. This process can go on for days, often testing the patience of everyone.

The Right Way to arrange your committee meeting

The preferred approach to scheduling committee meetings is to consult with your major professor and pick four or five potential timeslots. Then ask the remaining POS committee members which times they could be available to meet. Following the advice of the major professor, the student should indicate the expected duration of the planned meeting (usually about one to two hours) in the email message to POS committee members. This email request should be sent **several weeks prior** to the proposed date of the first POS meeting. Arrangements for the Proposal Meeting and Final Defense (which require longer time slots) should be made **at least one month in advance**. After obtaining faculty responses, the student should select a time when everyone can meet and a conference room is available for the meeting, and finally notify the POS committee members.

The whole process should be **completed within two to three days** so that slots available during the initial inquiry remain available. Email is the most efficient method of communication. It is important (and courteous) to send an email reminder of the meeting time and place to POS committee members **two to three days prior** to the scheduled meeting.

Writing Your Thesis/Creative Component

CTRE’s web page has several documents which will assist the student with thesis (or creative component) writing. They can be found under “Selected Student Resources” at:

<http://www.ctre.iastate.edu/educweb/gradededucation.htm>.

- Tips on writing your thesis (or creative component) (PowerPoint document)
- A template for efficient thesis (or creative component) preparation (Word document)

The Thesis/Dissertation website can provide details about thesis formats and other requirements at:

<http://www.grad-college.iastate.edu/thesis/homepage.html>.

When their thesis is ready for submission, students should use the *Thesis Checklist* found at:

<http://www.grad-college.iastate.edu/thesis/checklist.html>.

Note: Students with Community Regional Planning as a home department must submit three copies of their completed thesis to the Graduate College.

Application for Graduation

By midterm of the semester before the semester of graduation, students must submit to the Graduate College an *Application for Graduation (Diploma Slip)* indicating the expected date of graduation and other data. If a student does not graduate at the expected time, the Graduate College must be notified, and a new diploma slip must be submitted at a later time. Diploma slips are available at: <http://www.grad-college.iastate.edu/forms/forms.html>.

Final Examination

The Final Examination for the Transportation M.S. degree is an oral defense of the thesis (or creative component). This includes a required formal seminar presentation of thesis (or creative component) research to interested faculty, students, and other members of the Iowa State academic community. This examination will review the thesis (or creative component) and the candidate's knowledge of relevant subjects.

Students should submit a *Request for Final Examination* form after thesis (or creative component) work has been completed and all the other requirements have been met. This form is a 4-part carbon form and is not available on the website. Check with your graduate secretary for the form. After receipt of this form, the Graduate College will send a *Report of Final Examination* form directly to the major professor. The major professor is responsible for bringing this form to the final oral examination.

Letters of Recommendation after Graduation

When letters of recommendation are needed for future employment or grant proposals, students should directly contact faculty to ask whether they are willing to serve as referees. If so, students should provide the following:

- Plenty of advance notice (*at least three to four weeks*)
- A copy of the job ad or job description
- A current curriculum vitae
- An email reminder one week before the recommendation deadline

It is courteous (and wise) to send referees a complete numbered list of the letters needed, with deadlines clearly indicated **and** pre-addressed labels. An electronic copy of this address list is usually appreciated.

Dismissal Criteria

A student may be dismissed, that is, removed from the degree program and not be permitted to register as a Transportation student, for the following reasons:

- Failure to progress satisfactorily in his/her degree program. This may be evidenced by a lack of research progress, a lack of aptitude or a failure to maintain satisfactory academic standing, as defined by the Iowa State University *Graduate College Handbook*.
 - Failure to progress will be determined by the student's major professor and chair of the Transportation program. The student must meet, at a minimum, once per semester with their major professor to discuss whether satisfactory progress is being maintained. The major professor will rate the progress of the student according to *satisfactory*, *marginal*, or *needs improvement (probation)*. Both the student and the chair will be informed of this ranking. The student will be allowed one semester of probation before being terminated.

- Lack of a major professor. Graduate degrees in Transportation are centered around mentored research projects, therefore a research mentor (major professor) is required. To maintain good standing and earn a degree in Transportation, a student must have a major professor. A major professor should be chosen during the first semester.
- Academic dishonesty. The proper conduct of research requires the highest standards of personal integrity. The University considers dishonesty in the classroom or in the conduct of research to be a serious offense. Students accused of academic dishonesty will be dealt with according to the procedures outlined in the *University Catalog* and the *Faculty Handbook*. Possible punishments can include dismissal from the program and expulsion from the University, depending on the severity of the offense.

Dismissal Procedures

A student's POS committee or, if the student has no POS committee, the student's major professor, can recommend dismissal of a student for any of the reasons listed above. Recommendations for dismissal are made to the Transportation Chair and are acted on by the Transportation Program Committee.

Procedures for dismissal are as described in the *ISU Graduate College Handbook*. Before a dismissal is decided, the Transportation Chair must give the student a written notice explaining why dismissal is being considered. The Chair must also discuss the situation with the student as well as with the POS committee, major professor, temporary advisor, and/or Transportation Program Committee in an attempt to find a satisfactory resolution. This discussion constitutes the "informal conference" as described in the *Graduate College Handbook*. If a satisfactory resolution cannot be reached and the Transportation Program Committee votes to dismiss the student, either party may bring the issue to the attention of the Associate Dean of the Graduate College for a decision. The student may appeal the decision of the Associate Dean, as described in the *Graduate College Handbook*.

Appeal Process

The University has established appeal processes for student grievances. These vary depending on the nature of the grievance, and are described in the *Graduate Handbook*. Generally, these procedures begin with the program chair or the appropriate DEO. It is usually best for all parties if a satisfactory resolution can be reached without initiating a formal appeal process. The Associate Dean of the Graduate College is available to informally consult with students and faculty.

VI. Student Resources

Center for Transportation Research and Education

The Center for Transportation Research and Education (CTRE) is a focal point for transportation research and graduate education at Iowa State University. CTRE performs transportation research for public and private agencies and companies; manages its own education program for transportation students; and conducts local, regional, and national transportation services and continuing education programs. CTRE traces its roots to 1983 when it was established as one of the Federal Highway Administration's 10 original Rural Technical Assistance Programs (now Local Technical Assistance Programs).

The CTRE website is at: <http://www.ctre.iastate.edu>. The CTRE website hosts a comprehensive set of materials for to assist the student in the pursuit of education and the conduct of research. The student is urged to become familiar with the materials located at the Graduate Education in Transportation website. See <http://www.ctre.iastate.edu/educweb/gradededucation.htm>.

Materials at this site include:

Program

- Program description
- Admission requirements
- Apply to Iowa State University
- Funding graduate study
- Transportation Scholars program
- Transportation-related courses

Students who work at CTRE

- List of students
- Policies and procedures, for CTRE research assistants
- CTRE Student Handbook, a guide to employment with CTRE

Selected student resources

- Conducting research
- Presenting your work
- Working with others
- Preparing your thesis/creative component

Other links

- Department of Civil, Construction and Environmental Engineering at ISU
- Department of Community and Regional Planning at ISU
- Iowa State University of Science and Technology
- Transportation Student Association

Student Organizations

Transportation Student Association (TSA)

TSA strives to provide its members with real world information on transportation topics. TSA is multi-disciplinary and encompasses students from engineering, planning, and transportation & logistics. TSA serves as the parent organization for the student chapters of the Intelligent Transportation Society of America (ITS/A) and the Institute for Transportation Engineers (ITE). Speaker presentations are held bi-weekly to expose students to a wide variety of transportation-related topics. In addition, community service projects including Work Zone Safety presentations and Future Cities mentoring are also conducted. More information regarding TSA can be found at: <http://www.stuorg.iastate.edu/transa/>.

Graduate Student Senate (GSS)

The Graduate Student Senate is an elected body whose mission is to represent the interests of Iowa State graduate students and to promote social interaction among graduate students. The GSS office is located in G44 Memorial Union, 294-8725. More information regarding GSS can be found at: <http://www.grad-college.iastate.edu/gpss/>.

VII. Financial Matters

Graduate Appointments and Assistantships

The Center for Transportation Research and Education is closely affiliated with the Iowa Department of Transportation (also located in Ames) and many other transportation agencies and companies and generally provides students the opportunity to work on practical research issues.

Most (not all) students will be assigned to an externally funded research project lead by a faculty member or a senior professional researcher. For their work on the project the students will be paid an assistantship. Their experience while working on a research project is a core element of the student's education and their contribution to the research effort should be significant. Students are encouraged to do their personal research on a topic related to the funded research project. In such cases it is expected that the student's personal research will investigate an issue that is beyond the scope of what otherwise would have been done for the funded project.

Because the students involvement in a research project is as much a part of their learning experience as their academic work in the classroom, their performance while working as a paid researcher will be taken into account when the student is evaluated and performance on funded research will be given equal importance to class room performance when the student's performance is evaluated each semester.

It is important for students to discuss their future graduate assistantship support with potential major professors. It is assumed a MS degree in Transportation will be obtained within two years, and assistantships will not be available beyond a two-year time frame.

Financial constraints and program changes may result in adjustment in specific responsibilities and/or sources of funds during the period of appointment. .

Graduate research assistantships may be available through CTRE and the research directed by individual faculty. The number of assistantship appointments varies from year to year. Most research assistantships are half-time assistantships based on 20 hours of work per week. The research assistantship project the student is working on usually pertains to their thesis. The research assistantship work will be directed by the faculty or staff member in charge of the research project.

More information is available in the *Graduate College Handbook*.

Leave

The *Graduate College Handbook* states that:

Arrangements for a leave of absence are made between the graduate assistant and that assistant's supervisor. When a student employee needs to be absent either for personal reasons or illness, the supervisor should be understanding and accommodating to that need. At the same time, the graduate assistants should attempt to plan personal leave so that it does not interfere with or cause neglect of duties associated with his or her appointment. Supervisors of graduate assistants are responsible for ensuring that their assistants do not exceed reasonable limits for leave.

All ISU students with assistantship appointments are employees of ISU and, as such, are allowed the regular university holidays (New Year's Day, Martin Luther King Day, Memorial Day,

Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day, plus one additional day each year determined by the university administration).

Note: Other university breaks, such as spring break and between semesters are working days unless arrangements are made in advance with the research supervisor.

Professional Advancement Grants (PAGs) for Travel

Students should attend at least one national or international meeting during their degree program. Students are also strongly recommended to attend meetings to present results of their research as well as to obtain further knowledge concerning their thesis research.

Financial assistance may be available through *Professional Advancement Grants* from the Graduate College and the Graduate Student Senate. Check the Graduate and Professional Student Senate website under “PAG Funding” for the latest information about providing funds at:

<http://www.grad-college.iastate.edu/gpss/>. **Note: Incomplete applications will be denied and no appeals will be accepted.**

Other sources for financial assistance for travel may be major professors, home departments, CTRE, and in limited instances, from the Transportation Student Association.

Health Insurance Benefits

There are two levels of health insurance coverage. Information about the student group plan medical insurance and the benefits of the mandatory health fee can be obtained from the Student Health Center (294-5801). Information about the Student Health Service also is available on the web at www.health.iastate.edu.

As a benefit, graduate students on an assistantship receive a **single student** coverage free of charge under the ISU Student and Scholar Health Insurance Plan. Graduate assistants may enroll their spouse and children for an additional premium. For more information, contact the ISU Student and Scholar Insurance Office in 0570 Beardshear, 294-2394, or check the web page:

<http://www.hrs.iastate.edu/sship/homepage.html>.

VIII. Appendix

Example Transportation M.S. Student Timeline Checklist		Completed
Upon arrival at ISU	Meet CTRE staff and students	
	Obtain ISU ID card	
	Create email account	
	Discuss classes with faculty	
	<i>For international students</i> - Register with the International Students and Scholars Office (ISS)	
	<i>For international students</i> - Complete vaccinations	
	Register for classes	
During 1st Semester	<i>For international students</i> - Complete Graduate English Exam	
	Determine major professor	
	Determine POS committee members	
	Complete Committee Appointment form & submit for approval	
	Discuss POS with major professor and committee	
	Complete POS form and submit for approval	
During 2nd Semester	Continue fulfillment of coursework requirements	
	Enroll in Trans691 Transportation Seminar	
During 3rd Semester	Continue fulfillment of coursework requirements	
	Establish thesis (or creative component) research topic	
During 4th Semester	Write thesis (or creative component) proposal and submit to committee members	
	Conduct thesis (or creative component) proposal meeting	
	Conduct thesis (or creative component) research/composition	
	Complete coursework (excluding thesis or creative component credits)	
During 5th Semester	Register for thesis (or creative component) credits	
	Complete thesis (or creative component) research/composition	
	Submit Application for Graduation form	
	Consult committee members well in advance of proposed defense to arrange a oral defense date	
	Submit Request for Final Oral Examination form	
	Complete thesis (or creative component) and distribute to committee at least 2 weeks in advance of defense	
	Take thesis to Graduate College for preliminary format check	
	Defend thesis (or creative component)	
	Submit necessary number of copies of thesis to the Graduate College	