EASTERN
MICHIGAN UNIVERSITY
Education First

COLLEGE OF
ENGINEERING & TECHNOLOGY

STUDENT HANDBOOK

Ph.D. in Technology

2021

(Revised 1-24-20)

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Preface

The PhD in Technology program in the College of Engineering & Technology at Eastern Michigan University prepares students to become leaders in a global environment where technology is exponentially growing across a broad spectrum of disciplines. Grounded by a solid foundation of research methods and core courses, students work with an advisor to customize a program to their unique interests. The many diverse graduate programs housed within the College of Engineering & Technology (CET) give students a great deal of flexibility when designing a program or course of study. The program has been designed based on the following perspectives:

- How science, phenomena and society interact to shape technology applications;
- How technology applications are managed, deployed and assessed in society;
- How technical, organizational and human dimensions influence technology applications;
- How technological practices, ethics, and literacy impact each other;

The program prepares graduates for positions of increased responsibility in settings such as faculty in higher education, high-level management positions in government and industry, and policy analysis and research careers.

Concentrations for the PhD in Technology program include:

- Construction Management
- Engineering Management
- GIS
- Information Assurance
- Interior Design
- Polymers and Coatings
- Quality Management
- Technology and Society
- Technology Management
- Textiles

The program is administered by the Associate Dean of the College of Engineering & Technology and facilitated by the PhD in Technology Program Coordinator. The student handbook for the Eastern Michigan University PhD in Technology program is a companion to other university documents, including the current *Graduate School Catalog* which is available online.

Program Overview

Mission Statement

The PhD in Technology program focuses on the development of leaders with knowledge, skills, and expertise for expanding and making original contributions to the interdisciplinary study of technology, applied technology and its impact on all aspects of life.

Academic Advising

Upon admission to the program, each student is assigned an academic advisor/chair. The advisor/chair will be selected based on the student's concentration, research interests, and the availability of the faculty member selected to provide support and guidance throughout the entire research process. The academic advisor/chair must hold a PhD or EdD degree.

The academic advisor /chair will guide and assist the student in selecting courses and scheduling classes by meeting with the student on a consistent basis and completing the appropriate Program of Study (POS) within the student's first semester. The Program of Study must be submitted to the advisor/chair by the end of the student's first semester. The program of study used for each student is based on the year they were accepted into the PhD program.

Students should work with their advisor/chair to identify a sequence of courses that support their professional goals. The courses selected for the student's academic program can be changed at any time, with the approval of the advisor/chair, if other topics or ideas become available that support the student's research agenda. Some programs of study may include additional hours to provide learning opportunities at the discretion of the advisor/chair. Some programs of study incorporate courses from departments across the university.

Program Structure

The PhD in Technology curriculum consists of a minimum of 60 semester hours of coursework beyond the Master's degree. The exact number of hours will be determined by the student and their advisor/chair based on a review of previous graduate transcripts, the student's professional and personal aspirations, and the PhD degree requirements.

Program of Study (POS)

The appropriate program of study that must be followed by the student throughout their PhD program will depend on when the student was accepted into the PhD program. A description of the classes listed in these documents can be found in the EMU catalog.

1. Students accepted into the program *prior to Fall 2013* will follow the POS in Appendix A.
2. Students accepted into the program *between Fall 2013 but prior to Fall 2016* will follow the POS located in Appendix B.
3. Students accepted into the program *beginning Fall 2016* will follow the POS located in Appendix C.

Core Courses

The core courses provide foundational knowledge for students to study advanced topics in technology. These courses are required of all students in the program. Substitutions may not be made. The only exception is if a student has transferred credits from another doctoral program, similar courses may be substituted at the discretion of the CET Director or PhD Program Coordinator.

Concentration Courses

The students in consultation with their advisor/chair will identify and select courses to support their area of research interest. These courses may be within the College of Engineering & Technology or may be in other colleges as deemed appropriate by the student and their advisor/chair.

Cognate Courses

Students must take cognate courses that contribute to their intellectual and professional development from outside their concentration area or outside the College of Engineering & Technology. With the approval of their advisor/chair, cognate courses are designed to further augment their interdisciplinary skills in their area of interest. The cognate courses may be taken in one or a combination of departments that offer graduate level courses. Cognate courses are selected and completed only after the student's research focus has been identified and the courses must support their overall research agenda.

Students are encouraged to consider faculty from their cognate area(s) when selecting the external member of their dissertation committee.

PhD Electives

Students who are required to take electives based on their selected program of study must work with their advisor/chair to identify appropriate elective courses that support their dissertation and research agenda.

The Candidacy Qualifying Examination

The PhD in Technology student must complete all core and research skills courses with a grade of "B" or better before taking the candidacy qualifying examination.

The student must successfully pass their candidacy qualifying examination prior to working on their dissertation research proposal or registering for any dissertation research credits.

The purpose of candidacy examination is to determine the student's ability to:

- Identify research problems in applied technology and apply a range of different research methods that could be used to collect and analyze data and/or information to resolve those problems;
- Find, analyze, integrate, synthesize, and evaluate literature related to the research problem(s);
- Document research plans clearly and formally in writing using EMU PhD dissertation format and APA style requirements;

For students who entered the program prior to Fall 2016 and who have successfully completed/passed COT 795: The candidacy qualifying examination committee is formed by the student and their advisor/chair and with guidance from the PhD Program Coordinator. All members of the Candidacy Examination Committee must be members of the College of Engineering & Technology. The committee shall consist of the following members:

- Student advisor/chair (committee chair)
- One faculty member with expertise or experience in research methods or a faculty member who has chaired a dissertation to completion.
- One additional faculty member from the College of Engineering & Technology who is knowledgeable about the topic.

The student will prepare three prospecti on their topic using three different methodologies: quantitative, qualitative, and experimental. After the student's three written research prospecti have been reviewed and approved by their advisor/chair, the student will distribute copies to the rest of their candidacy examination committee two weeks prior to the scheduled candidacy

examination meeting. Scheduling a room for this meeting is the responsibility of the student. At the meeting, the student will present a 10-minute PowerPoint presentation on each prospectus. The remainder of the meeting will consist of questions from the committee to determine if the student's ideas are viable and to ensure that the student understands basic research techniques to initiate doctoral level research.

At the end of the candidacy examination, the student will be asked to leave the room so the committee may discuss the outcome and make a recommendation. The committee may recommend that the student:

- Pass and be recommended for candidacy and proceed to writing a fully developed dissertation proposal;
- Retake the examination (either partially or totally) after a remediation plan has been developed and implemented;
- Withdraw from the PhD program.

The chair of the candidacy examination committee will obtain signatures from all committee members and submit the Candidacy Qualifying Examination Committee Report.

Students who fail the exam may be dismissed from the program. Students who fail may appeal the decision in writing to the PhD Program Coordinator within 30 days of the failure of the examination. Once an appeal has been received, the Program Coordinator, in consultation with the advisor/chair and the Director, will review the appeal. If the recommendation of this committee is to provide a second opportunity for examination, the second exam must take place within six weeks of this approval. If it is not retaken during the six-week timeframe, the student will be dismissed from the program.

For students who entered the program Fall 2016 or after: The CET doctoral program requires students to participate in a Candidacy Qualifying Exam to demonstrate their understanding of applications of multiple research methods related to applied technology in their select field of concentration". The exam will be available to current PhD students who have completed all of the core classes and the research skills classes.

- The exam will be offered at least once each year.

- The exam will be administered in a room that has computers but no internet access.
- The questions will cover standard concepts from the core and research skills classes.

The Program Coordinator will notify students and their advisors/chairs of the results of their Candidacy Exam.

Dissertation Research Courses

Once students have successfully passed their Candidacy Qualifying Exam, they may enroll in the dissertation research courses. After approval by the advisor/chair, the courses may be taken in any semester and in conjunction with other courses needed for their program. Please follow the appropriate program of study to determine the number of dissertation research credits required for your program.

The Proposal and Dissertation

Selecting the Dissertation Committee

After successfully passing the Candidacy Qualifying Examination, if they have not already done so, the student, in conjunction with their advisor/chair, must form their dissertation committee. The committee must be comprised of at least three members from the College of Engineering & Technology, including the student's advisor/chair. The committee must also have an additional representative from Eastern Michigan University, but outside the College of Engineering & Technology. Additional committee member(s) from outside the university may be included if agreed upon by the student and the committee chair.

Each committee member must be a full-time faculty member with a doctorate degree (PhD or EdD). Committee members may also consist of full-time or part-time lecturers with prior approval of the PhD Program Coordinator and the Graduate School. Committee members should be selected to represent areas of expertise related to the student's research topic or to provide guidance with research methodology.

After the composition of the dissertation committee is determined, the Dissertation Committee Approval Form must be completed/submitted by the advisor/chair to the PhD Program Coordinator for authorization. The form will then be forwarded to the Graduate School for final approval.

Proposal Exam

After successfully passing the candidacy qualifying examination, the student will work with their advisor/chair to develop a written dissertation proposal to be presented to their dissertation committee. The purpose of the proposal exam is to ensure the student is prepared for doctoral research. The dissertation proposal will normally consist of the first three complete chapters of the dissertation and includes:

- Cover page
- Preliminary pages
- Introduction/Overview (Chapter 1)

- Review of the Literature (Chapter 2)
- Research Methodology (Chapter 3)
- References and/or appendices

Students may complete their research using the facilities at Eastern Michigan University, or may choose to perform their PhD research off campus, e.g., national labs. Permission to complete the research portion of the program (both on and off campus) must be approved by the student's dissertation committee and the PhD Program Coordinator.

When the student and advisor/chair agree that the proposal is ready to be presented to the committee, the student must give the committee a minimum of two weeks to read the final copy prior to the proposal exam meeting. The student will schedule the proposal exam with the approval of their advisor/chair and the availability of their committee members.

During the proposal exam, the student will present the proposal to the committee using relevant handouts, visual aids and PowerPoint slides. At the end of the presentation, the committee will ask questions of the student to either clarify the research problem, the literature or the methodology, ensure that the student has a thorough understanding of the background of the research, and a good plan for conducting the research.

At the end of the meeting, the committee will ask the student to leave so that they may deliberate on the results of the exam. They may recommend that the student:

- Pass with minimal corrections;
- Pass with major corrections;
- Not pass with a new topic to be considered, or requiring that the defense be repeated.

When final approval of the proposal has been granted, all committee members will sign and date the Doctoral Dissertation Proposal Approval form. The chair will then submit the signed form to the PhD Program Coordinator for to be processed. A copy of the form will be kept in the student's file and a copy will be forwarded to the Graduate School.

Human Subjects Approval

If human subjects are going to be used in the research, after the proposal has been approved, the student must prepare and submit an application for human subjects approval by EMU's Institutional Review Board (IRB). Before the application can be submitted to the IRB committee, a copy of the application must be given to the advisor/chair for their approval. A copy of the application and the proposal must also be submitted to the PhD Program Coordinator. The human subjects application must be approved by IRB, and the proposal approved by the dissertation committee before students begin their data collection.

Low Enrollment Semesters

If a student has completed all of their coursework but has not completed their dissertation, they may need to complete the Doctoral Student Low Enrollment Form found in the Graduate School Dissertation Manual. It must be approved by the PhD Program Coordinator and authorized by the Graduate School.

Continuous Enrollment

All PhD students must be continuously enrolled every fall and winter semester while in the PhD program, including the semester in which they defend their dissertation. COT 767 "Continuous Enrollment" is a one (1) credit course that is used when a student must continue to stay affiliated with the university. The course may be used more than once and only carries a credit/no-credit grade. It does not influence the GPA of students. Failure to be continuously enrolled in at least one credit every semester, including the semester that they defend their dissertation, will be grounds for dismissal from the PhD in Technology program.

Completing the Research and the Dissertation Defense

Students who have successfully passed their proposal exam, and with the approval of their advisor/chair, should complete their remaining classes and register for their dissertation research credits. During this time the student will also complete their research project, using the expertise of the committee members as appropriate.

When the advisor/chair and the student believe that the dissertation is complete, a final defense meeting will be scheduled. Scheduling the room for this meeting is the responsibility of the student. The student must give the committee members a minimum of two weeks to read the final copy of the dissertation prior to the final defense meeting. The date and time of this defense and the title of the dissertation along with one-page summary of the project must be submitted to the PhD program secretary two weeks in advance so that this event can be announced to the campus community.

The dissertation defense cannot occur until all courses required for the student's program have been completed, with the exception of dissertation research courses. Dissertation research courses must either be completed prior to the dissertation defense or registered for in the same semester that the dissertation defense will take place.

The student will give a 20-25 minute presentation to the committee and any guests or students who are present. The student is responsible for ensuring that any needed audio visual equipment is available in the scheduled room. It is recommended that this presentation be rehearsed with the student's dissertation chair in advance to ensure its completeness.

After the presentation, the committee will ask questions of the student to either clarify the research or to ensure that the student understands the background, results, and ramifications of the research. At the end of this discussion, the student and the guests will leave the room so that the committee may deliberate on the results of the defense.

During deliberation, the dissertation committee will determine if:

1. The written dissertation meets PhD standards of quality and rigor.
2. The student has successfully defended the research conducted.
3. The research study adds to the body of knowledge.
4. The quantity of research is deserving of a doctoral degree.
5. The student's work is original.

After the Oral Defense of the Doctoral Dissertation, the committee may recommend that the student:

- Satisfactorily passed the oral defense of the dissertation, or
- Did not satisfactorily pass the oral defense of the dissertation.

Upon satisfactory completion of the dissertation oral defense by the student and when final dissertation approval has been granted, all committee members will sign and date the approval page of the Dissertation and the Oral Defense Dissertation Approval Form. The student is responsible for completing and bringing the unsigned documents to the presentation.

In addition, if the committee agrees that the student successfully completed the written dissertation, the committee will sign and date the Doctoral Dissertation Document Approval Form.

Once the Oral Defense Dissertation Approval Form and Dissertation Document form are completed, the chair of the dissertation committee will submit these forms to the PhD program secretary who will forward it to the PhD Program Coordinator for approval and then to the Graduate School.

Deadline dates for submitting dissertations to the Graduate School for review are November 1, March 1, and June 1. Thus, oral defense meetings for final dissertation should be scheduled at least one (1) month prior to these dates to allow final corrections to be made and the corrected document to be submitted to the Graduate School on time. (See Graduate School Dissertation Manual for submission details).

Once the student has successfully defended their dissertation and submitted the final written dissertation, the advisor/chair will complete and submit the change of grade forms for dissertation research credit that may be needed to change any IP, I, or N grades.

Awarding the PhD Degree

Each student must apply for graduation as stated in in the Graduate School Dissertation Manual. The PhD degree will be conferred once all Graduate School requirements have been met. *Students may not use the title of 'doctor' or put PhD after their name until EMU confers their degree.*

Commencement/Graduation attendance requires a special EMU cap and gown. They are usually available at the campus bookstore. Details on the graduation requirements are available at: http://www.emich.edu/commencement/

Financial Aid

Graduate Assistantships (GA)

Graduate Assistant positions are awarded to doctoral students for the Fall and Winter semesters. These positions are assigned to work in one of the academic units in the College of Engineering & Technology. These positions pay a stipend, cover a tuition/differential tuition scholarship, and require the student to work a set number of hours per week. The student will work under the direction of their assigned faculty to conduct research, teach classes, or participate in other relevant activities.

The applicants for a GA position must have a 3.0 GPA. Other details on these positions are available on the Graduate School Website at:
https://www.emich.edu/graduate/financial_assistance/assistantships.php
The "Financial Aid" tab on the Graduate School home page can also be resourceful in learning about other forms of financial aid at:
http://www.emich.edu/graduate/financial_assistance/scholarships/graduate_scholarships.php

Doctoral Fellowships

Doctoral fellowships are available to highly qualified students in the PhD program. The graduate fellowship is an honor of distinction awarded to selected PhD students based on

academic merit and performance. Doctoral fellowships are 12-month appointments and provide a stipend and tuition/differential tuition scholarship. Fellows must enroll in and complete at least six hours of graduate level coursework in each of the Fall and Winter semesters of the award and one (1) credit hour during the Summer semester. To be considered for a fellowship, the applicants must have a minimum of 3.6 GPA and must have successfully completed 12- credit hours of PhD courses in the College of Engineering & Technology to be considered for a fellowship, Once a student is awarded a doctoral fellowship, they must maintain 3.6 GPA.

Doctoral Fellows may be assigned some of the following duties:

1. Provide research assistance consistent with the student's and dissertation chair's scholarly agenda;
2. Participate in research (sponsored or unsponsored) consistent with the student's and dissertation chair's scholarly agenda;
3. Teach one or more sections of an undergraduate or master's level course in an area in which they are qualified in the College of Engineering & Technology;
4. Assist in the development and operation of seminars and symposium for the college;
5. Perform tasks and duties normally associated with the honor of a fellowship.

The tuition stipend and related benefits will be in accordance with those currently in effect through the Graduate School for graduate assistants and doctoral fellows.

Transferring Courses to EMU

New PhD students: Courses completed beyond the Master's degree and completed at other institutions may be transferred into a student's program with the approval of the advisor/chair and the PhD Program Coordinator. The maximum credits beyond the Master's degree that can be transferred to the PhD program is twelve (12) credits.

PhD students transferring from another university's PhD program into EMU's PhD program: PhD credits taken at another institution will be evaluated by the student's advisor/chair and the PhD Program Coordinator based on Graduate School guidelines to determine their relevance to the student's area of research.

Credits earned and applied to the first master's degree may not be used for the PhD degree.

The Request for Transfer of Credit form must be submitted by the student with approval of the advisor/chair and PhD Program Coordinator. The form is then sent to the Registrar's office for processing. This form can be obtained at the Graduate School website.

Eastern Michigan University and the College of Engineering & Technology reserve the right to change any statement in this document concerning, but not limited to, rules, policies, tuition, fees, curricula and courses at any time.

Responsibilities and Expectations of PhD Students

The University and the College of Engineering & Technology expect students to conduct themselves in a manner consistent with the law along with all relevant university policies and rules, including the University Student Code of Conduct.

Non-Academic Behaviors Resulting in University Disciplinary Action

Any behavior by a PhD student that is a violation of the University Student Code of Community Responsibility will be referred to the Office of Wellness & Community Responsibility for campus disciplinary action, in addition to any actions taken by the College of Engineering & Technology. The conduct code outlines the kinds of student behaviors that will result in disciplinary action, including possible dismissal from the university. Conduct violations by a student off-campus while involved in university related activities (e.g. field research) will be handled as if the violation had occurred on-campus.

Academic Behaviors Resulting in Disciplinary Action

Certain behaviors or performance will be considered grounds for academic discipline in accordance with the procedures outlined in this document.

Academic disciplinary actions may be initiated when a student exhibits any of the following behavior in a single episode that is a violation of the law or when a student exhibits a pattern of recurring behavior that may include, but is not limited to the following:

- Performance or behaviors that demonstrate poor interpersonal skills and an inability to effectively communicate, often with the evidence of repeated complaints from the advisor/chair, other students or departmental faculty;
- Unethical or unprofessional conduct, such as written documents, social media posts, or verbal statements that claim they have already graduated with a PhD from EMU.
- Threatening or intimidating conduct or actions to students, staff, or faculty.
- Behaviors that place others at risk during the research experience, including substance abuse; emotional, physical or verbal abuse; vindictive actions toward coworkers, students, faculty or staff, or stealing from co-workers, students, faculty or staff.

- Violation of laboratory safety rules as explained by faculty, manager of the lab, or by the University safety officials.
- Behavioral displays of mental or emotional difficulties that represent a risk to others.
- Consistent inability or unwillingness to carry out academic or research placement responsibilities.
- Frequent excuses when tasks, assignments, tests and appointments are not completed in a timely manner or require rescheduling.
- Consistent non-attendance in classes, at research placement and other required departmental functions.
- Lack of insight into negative consequences of own behavior and frequent blame of others or external factors for failures and difficulties in the academic or research placement environment.
- Inability to tolerate other points of view, feedback or supervision.
- Dishonest academic practices, including but not limited to: plagiarism, cheating, fabrication, aiding and abetting deception or dishonesty, and the falsification of records or official documents.
- Verbal or physical aggressiveness toward others.

Academic Behavior Issues

Any concern about a particular student's academic behavior or performance should be brought to the attention of the student's advisor/chair or the PhD in Technology Program Coordinator. The advisor/chair or PhD Program Coordinator will then schedule a meeting with the student, and the person raising the concern about the student's behavior or performance. The meeting is not to be interpreted as disciplinary, but rather as an effort to assist the student in finding ways to improve their performance.

Scholastic Performance Resulting in Departmental Action

Grade Point Requirements (GPA)

Once admitted into the PhD program, a student must maintain a cumulative 3.0 GPA. A student who fails to achieve the cumulative 3.0 minimum by the time they are to take the candidacy examination will be placed on "college academic probation" and will not be allowed to take the candidacy examination.

The student will then have up to two additional semesters to raise their GPA to the 3.0 minimum. Failure to raise their GPA by the end of two semesters will result in dismissal from the PhD program.

Individual Course Grade Requirements

A PhD student must achieve a minimum letter grade of "B" in all required core and research methods courses in order to remain in and graduate from the program. A student who receives a grade below a "B" in a core or research methods course will be allowed to repeat that course one time only. A student may repeat no more than two core or research methods courses in which they have failed to achieve a "B" grade. Failure to receive a "B" in the second core or research methods course will cause the student to be placed on "college academic probation." If a student receives a grade below a "B" in the third core course, the student will be dismissed from the PhD program. A student who receives a grade below a "B" in a core or research methods course they are repeating will also be dismissed from the program.

Appealing Academic Probation or Dismissal

The student will be notified in writing by the PhD in Technology Program Coordinator of their academic status as it pertains to "college academic probation" or "dismissal." A student who is placed on college academic probation must set up a meeting with their academic advisor to develop a remediation plan.

A student who is dismissed from the program because of scholastic performance deficiency may request that the Dean of the College of Engineering & Technology review the dismissal. The student has ten calendar days from the date of the notice of dismissal from the Program Coordinator to request in writing that the Dean review the dismissal decision. The Dean will schedule a meeting with the student, the student's advisor/chair and the Program Coordinator as soon as possible. The Dean will notify the student, in writing, within ten calendar days of the review meeting if the dismissal is being upheld. The Dean's decision is final.

Grading Policies

Grades and expectations of PhD students will be determined by the individual faculty of each course as outlined in the course syllabus. As per university policy, a student may pursue a grade grievance for any final grade that they believe was assigned capriciously or unfairly.

The grade grievance must be filed according to the university's grade grievance procedure. Grievances should be pursued in the faculty member's school.

Academic Dishonesty

Engaging in academic dishonesty in any form with respect to examinations, course assignments, research projects, grades, and/or academic records, includes but is not limited to the following:

Cheating and Falsification

Using or attempting to use unauthorized materials, information or study aids in any academic assignment. Examples of cheating are: looking on someone else's paper; using any kind of "cheat" sheet or other enhancement during a test; allowing someone else to take an exam in your place; submitting the same work more than once for credit; using someone else's homework; improper collaborating on any assignment or take-home test if told that collaboration was not allowed; assisting another student in committing an act of academic dishonesty by allowing another student to copy homework or an exam; taking an exam for someone else; or giving test information to students in other sections of the same class.

Intentional and unauthorized falsification or invention of any information or citation in an academic assignment is a falsification. Examples of falsification are: making up data on an assignment; making up a source in a paper; altering then resubmitting returned academic work; giving false information to a faculty or staff member to increase one's grade; or attempting to change, actually changing, altering grades or unauthorized tampering with grades.

Plagiarism

Deliberate and knowing use of someone else's work or ideas as one's own is *plagiarism*. Examples of *plagiarism* are: quoting a source verbatim, or paraphrasing text from a given source, without properly citing the source; turning in a research paper that was written by someone else; or in any other way passing off someone else's work as one's own; or failing to give credit for ideas or materials taken from someone else.

APPENDIX A

(Students who entered prior to Fall 2013)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Student's Name Student Number:

Last First

Address: Home Number:

Cell Phone Number:

City State Zip

Date Admitted: Program Concentration:

Email Address: Other Email:

Part A: <u>To be completed by Advisor/Chair and Student</u>

	Credit Hours	Semester to be Completed	Other Notes
Ph.D. CORE COURSES	**(9 hours)**		
COT 700 Introduction to the Interdisciplinary Study of Technology	3		
COT 704 Legal and Policy Aspects of New Technologies	3		
COT 705 Technology, Design, Development and Transfer	3		
Ph.D. RESEARCH SKILLS COURSES	**(11 hours)**		
COT 710 Introductory Research Design and Applied Statistics in Technology	3		
COT 711 Advanced Research Design and Applied Statistics in Technology	3		
COT 712 Qualitative Research Methods and Design in Technology	2		
COT 795 Research Design Capstone Seminar	3		
Ph.D. ELECTIVE COURSE ***(Shall be one of the following courses)***	**(3 hours)**		
COT 701 Technology Trends and Issues	3		
COT 702 Planning for Technological Change	3		
COT 715 Implementing and Managing Technological Change	3		
COT 780 Technology Impact Assessment	3		

APPENDIX A

(Students who entered prior to Fall 2013)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

	Credit Hours	Semester to be Completed	Other Notes
Ph.D. CONCENTRATION COURSES *Courses recommended to support dissertation research*	**(minimum 15 hours)**		
Ph.D. COGNATE COURSES **(Shall be Outside Concentration area)** *Courses recommended to support dissertation research*	**(6 hours)**		
Ph.D. DISSERTATION RESEARCH	**(15 hours)**		
COT 894 Candidacy Seminar	2		
COT 896 Dissertation Research	1		
COT 898 Dissertation Research	4		
COT 899 Dissertation Research	8		

Part B: To be completed by Advisor/Chair and Student

NO CHANGES MAY BE MADE ON THE POS WITHOUT PERMISSION OF THE ADVISOR/CHAIR AND APPROVAL BY THE Ph.D. PROGRAM COORDINATOR.

Date of Last Approved POS: _____

Student: _____

Printed Name Signature Date

Dissertation Advisor: _____

Printed Name Signature Date

Ph.D. Program Coordinator: _____

Printed Name Signature Date

APPENDIX A

(Students who entered prior to Fall 2013)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Part C: <u>To be completed by Advisor/Chair and Student</u>

Candidacy Exam Committee Members:

(Chair)

(Member)

(Member)

(Member)

(Member)

Dissertation Committee Members:

(Chair)

(Member)

(Member)

(Member)

(Graduate School Representative)

Date Candidacy Exam Passed: _____

Date Proposal Defended: _____

Dissertation Title: _____

Date Dissertation Defended: _____

APPENDIX B

(Students who entered Fall 2013 but prior to Fall 2016)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Student's Name Student Number:

Last First

Address: Home Number:

Cell Phone Number:

City State Zip

Date Admitted: Program Concentration:

Email Address: Other Email:

Part A: <u>To be completed by Advisor/Chair and Student</u>

	Credit Hours	Semester to be Completed	Other Notes
Ph.D. CORE COURSES	**(9 hours)**		
COT 700 Introduction to the Interdisciplinary Study of Technology	3		
COT 704 Legal and Policy Aspects of New Technologies	3		
COT 705 Technology, Design, Development and Transfer	3		
Ph.D. RESEARCH SKILLS COURSES	**(12 hours)**		
COT 709 Introduction to Statistical Reasoning in Technology	3		
COT 710 Research Methods in Technology	3		
COT 711 Advanced Research Design and Applied Statistics in Tech	3		
COT 795 Research Design Capstone Seminar	3		
Ph.D. ELECTIVE COURSE ***(Shall be one of the following courses)***	**(3 hours)**		
COT 701 Technology Trends and Issues	3		
COT 702 Planning for Technological Change	3		
COT 715 Implementing and Managing Technological Change	3		
COT 780 Technology Impact Assessment	3		

APPENDIX B

(Students who entered Fall 2013, but prior to Fall 2016)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

	Credit Hours	Semester to be Completed	Other Notes
Ph.D. CONCENTRATION COURSES *Courses recommended to support dissertation research*	**(minimum 15 hours)**		
Ph.D. COGNATE COURSES **(Shall be Outside Concentration area)** *Courses recommended to support dissertation research*	**(6 hours)**		
Ph.D. DISSERTATION RESEARCH	**(15 hours)**		
COT 894 Candidacy Seminar	2		
COT 896 Dissertation Research	1		
COT 898 Dissertation Research	4		
COT 899 Dissertation Research	8		

Part B: To be completed by Advisor/Chair and Student

Date of Last Approved POS: _____

Student: _____

Printed Name Signature Date

Advisor/Chair: _____

Printed Name Signature Date

Ph.D. Program Coordinator: _____

Printed Name Signature Date

APPENDIX B

(Students who entered Fall 2013, but prior to Fall 2016)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Part C: <u>To be completed by the Advisor/Chair and Student</u>

Candidacy Exam Committee Members:	Dissertation Committee Members:
(Chair)	(Chair)
(Member)	(Member)
(Member)	(Member)
(Member)	(Member)
(Member)	(Graduate School Representative)

Date Candidacy Exam Passed: _____

Date Proposal Defended: _____

Dissertation Title: _____

Date Dissertation Defended: _____

APPENDIX C

(Students who entered Fall 2016 and after)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Student's Name: _____ **EID: E**_____

Address: _____ **Home Phone:** _____ **Cell Phone:** _____

City, State, Zip: _____

Program

Semester Admitted:_____ **Concentration:** _____

my.emich email: _____

Part A: To Be Completed by Advisor/Chair and Student

	Credit Hours	Semester to be Completed	Other
Ph.D. CORE COURSES	**(9 credits)**		
COT 700 – Introduction to the Interdisciplinary Study of Technology	3		
COT 704 – Theoretical Frameworks in Technology	3		
COT 705 – Technology Innovation and Transfer	3		
Ph.D. RESEARCH SKILLS COURSES	**(9 hours)**	Semester to be Completed	Other
COT 709 – Introduction to Statistical Reasoning in Technology	3		
COT 710 – Research Methods in Technology	3		
COT 711 – Advanced Research Design & Applied Statistics in Technology	3		
Ph.D. COGNATE COURSES ***(must be outside the area of concentration or outside the College of Technology)***	**(6 hours)**	Semester to be Completed	Other
This is a planned program of course work beyond the core and technical concentration that contributes to the student's intellectual and professional development, and their area of research interest. Cognate courses should together constitute a unified experience in a particular subject or discipline area.			

APPENDIX C

(Students who entered Fall 2016 and after)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

	Credit Hours	Semester to be Completed	Other
Ph.D. CONCENTRATION COURSES *Courses recommended to support dissertation research*	**(15 hours)**		
Ph.D. DISSERTATION RESEARCH **COT 896 – 1 credit hour** **COT 897 – 2 credit hours** **COT 898 – 4 credit hours** **COT 899 – 8 credit hours**	Credit Hours	Semester to be Completed	Other
	(21 hours)		

Part B: <u>To be completed by the Advisor/Chair and Student</u>

Date of Last Approved POS: _____

Student: _____ Printed Name

Signature

Date

Advisor/Chair: _____ Printed Name

Signature

Date

Ph.D. Program Coordinator: _____

Printed Name

Signature

Date

APPENDIX C

(Students who entered Fall 2016 and after)

EASTERN MICHIGAN UNIVERSITY

College of Engineering & Technology

Ph.D. in Technology Program

Program of Study

Part C: To be completed by the Advisor/Chair and Student

Candidacy Exam Committee Members:	Dissertation Committee Members:
_____ (Chair)	_____ (Chair)
_____ (Member)	_____ (Member)
_____ (Member)	_____ (Member)
_____ (Member)	_____ (Member)
_____ (Member)	_____ (Graduate School Representative)

Date Candidacy Exam Passed: _____

Date Proposal Defended: _____

Dissertation Title: _____

Date Dissertation Defended: _____