Bachelor's with an Accelerated Master's Program Electrical Engineering

1. Introduction

The Bachelor's with Accelerated Master's (BAM) degree program allows undergraduate students in the Electrical Engineering Program to complete the requirements for both the Bachelor's and the Master's degrees at an accelerated pace. Currently, earning 129 undergraduate credit hours is required to receive a Bachelor's degree. The Master's degree requirement is 33 graduate credit hours with the non-thesis option, or 30 hours with the thesis option. In either case, at least 15 hours must be taken at the 6000 level. Having enrolled in the BAM program students may count up to 12 credit hours of 5000 level courses taken during their undergraduate studies at WMU toward a Master's Degree in Electrical Engineering, or in Computer Engineering. Full time students may be able to get both their Bachelor's and Master's degrees in a five-year time period.

2. Application to the BAM Program

2.1 A prospective student who meets the eligibility requirements (see Criteria for Admission) must set up a meeting with the ECE Undergraduate Adviser and the ECE Graduate Adviser to develop Plans of Study for the Bachelor's and Master's degree programs.

2.2 Before admission to an BAM program can be finalized, students must submit the standard application for admission to the Office of Admissions/Graduate Admissions including:

2.2.1 Application
2.2.2 Application fee
2.2.3 Copy of all transcripts
2.2.4 Graduate Record Exam (GRE) scores
2.2.5 Plan of Graduate Study, signed by the prospective student, the ECE Undergraduate Adviser and the ECE Graduate Adviser

2.3 The Plan of Graduate Study for the Master's degree must clearly indicate the 5000 level courses (a maximum of 12 graduate credit hours) that will be counted for both Bachelor's and Master's degrees.

3. Criteria for Admission to the BAM Program

3.1 The student must apply through the Office of Admissions and Orientation-Graduate Admissions and must also apply for admission to the graduate degree granting department. After admission into the BAM, the student's record will indicate the BAM status. Admission to the BAM program is contingent on meeting the following eligibility requirements at the time of entering the graduate program:

3.1.1 Students must have at least junior standing and earned a minimum of fifteen (15) WMU ECE credit hours with a major GPA of 3.2/4.0 or better.
3.1.2 Students must have a minimum accumulated grade point average (GPA) of 3.4/4.0 based upon credit hours earned at WMU. This GPA is based upon at least 30 credit hours at WMU.

4. Requirements for Participation and Graduation

4.1 Students must complete the Bachelor's degree prior to entering the Master's program. Students in the BAM may not elect to bypass the Bachelor's degree.

4.2 Students will only be allowed to count a maximum of twelve (12) 5000 level credits taken during their undergraduate studies toward their Master's degree.

4.3 Students must receive a grade of B (3.0/4.0) or better in the 5000 level courses taken during their undergraduate studies. Students who do not meet this criterion will have the earned grade applied to their undergraduate program only, and must apply for readmission into the graduate program.

4.4 No more than twelve (12) hours of graduate work may be counted towards the requirements of both degrees.

5. Continuing Eligibility

5.1 It is the responsibility of the student to recognize his/her eligibility status.

5.2 A student completing the Bachelor's degree requirements with an accumulated GPA of less than 3.0/4.0 is no longer eligible to count the 5000 level credit hours specified in Section 2.3 toward the Master's degree.

5.3 A student who does not follow an approved Plan of Graduate Study may become ineligible to participate in the BAM program.

5.4 A student who is ineligible to participate in (or withdraws from) the BAM program cannot count any of the courses specified in Section 2.3 for both Bachelor's and Master's degrees. These courses, however, may be counted toward the student's Bachelor's degree upon the discretion of the ECE Undergraduate Adviser.
5.5 A student who becomes ineligible to participate in the BAM degree program must be informed by the ECE Graduate Adviser in writing of his/her ineligibility. A copy of this letter to the student must be sent to the Graduate College.

6. Withdrawal

A student may at any time withdraw from an approved BAM program by informing both the ECE Undergraduate Advisor and the ECE Graduate Adviser in writing. A copy of this request to withdraw must be sent to the Graduate College.

7. Currently Available Eligible ECE 5000 Courses

The following is a list of ECE 5000 level courses that can be taken by students:

1. ECE 5150 Real Time Computing
2. ECE 5200 Power Electronics: Dynamics and Control
3. ECE 5240 Intro to VLSI Technology
4. ECE 5300 Electric Power Systems
5. ECE 5410 Electronics Instrumentation I
6. ECE 5450 Intro to MEMS
7. ECE 5510 Application Specific Integrated Circuit Design
8. ECE 5520 Switching and Finite Automata Theory
9. ECE 5530 Microcontroller Applications
10. ECE 5550 Digital Signal Processing
11. ECE 5570 Design of Reconfigurable Digital Machines
12. ECE 5600 Time Varying Fields
13. ECE 5640 Communication Systems
14. ECE 5700 Digital Control Systems
15. ECE 5710 State Space Control Systems
16. ECE 5730 Foundations of Neural Networks
17. ECE 5950 Digital Electronics

*The following is an example of an electrical engineering students schedule in the BAM program during their senior year:

**Seventh Semester (17 hours)**
- General Education Credits: 3 hours
- ECE 4810 - Electrical/Computer Engineering Design I Credits: 2 hours
- Permission form required to be signed by ECE advisor and department chair. Must complete ECE 2510, IME 3160, and either ECE 3200 or ECE 3300.
- IME 3100 - Engineering Economy Credits: 3 hours
- ME 2580 - Dynamics Credits: 3 hours

**Electrical and Computer Engineering Elective Group (6 hours)** Choose from the above listed 5000 level Electrical Engineering courses with the approval of the undergraduate and graduate advisor.

**Eighth Semester (15 hours)**
- General Education Credits: 3 hours
- ME Engineering Science Elective Credits: 3 hours
- Department approved technical elective Credits: 3 hours
  Choose from the above listed 5000 level Electrical Engineering courses with the approval of the undergraduate and graduate advisor.
- ECE 4820 - Electrical/Computer Engineering Design II Credits: 3 hours

**Electrical and Computer Engineering Elective Group (3 hours)** Choose from the above listed 5000 level Electrical Engineering courses with the approval of the undergraduate and graduate advisor.

*This sample schedule would allow 12 credits of the 5000 level courses to be counted towards the student’s master degree if all terms and conditions of the BAM program are met.*