

Guidelines for Transfer to Electrical Engineering

The information here is intended to assist in evaluating the academic requirements and course/program issues involved in a transfer in to the Electrical Engineering program.

Transfer from Electrical Engineering or Engineering Physics to another program is handled by the department to which you wish to transfer. You should therefore contact that department for information.

Procedure

Transfers to the Electrical Engineering program are considered once a year, in the summer. In order to apply for transfer, use the “change of major” form available on the registrar’s office website. Deadlines and specific information about transfer applications will be available through the engineering academic support website.

Academic Requirements

Students are not eligible for consideration until they have completed all first year requirements.

Enrollment in the Electrical Engineering program is at capacity, and normally very few students request transfer out of EE. Thus, the number of spaces available for students to transfer into the program is very limited. Evaluation of application for these few spaces is on the basis of the applicant’s CGPA in all their current program courses taken so far. In the past few years, students successful in achieving transfer have had a CGPA well above 9.0.

Please note also that the specific pattern of courses is also taken into account. Preference is given to students who have completed their program courses with no repetitions. The CGPA of a student who raises their grade through course repetition or overloading on CSE electives to avoid more difficult engineering courses will be de-rated accordingly.

Course/Program Issues

The following pages provide a detailed breakdown of the issues involved in transfer to the EE program from the EngPhys, Computer Systems and Communications programs, and a short description of the issues with transfer from other programs.

The guidelines identify the requirements based on full-year boundaries, and are therefore best-case from the standpoint of time to completion. Students with partial completion of a year or on split programs can use these guidelines along with the prerequisite trees available on the Engineering Academic Support website to construct a custom scenario for their particular situation. Transfer with partial completion of a year almost inevitably results in a longer time to completion.

Transfer from the Engineering Physics Program

The table on the following page compares the requirements of the two programs.

Transferring after completion of Engineering Physics first year:

- The 0.5 credit CSE can be taken in place of ALSS 1000 in 2nd year.
- Completion of PHYS 1001 will satisfy the requirement for PHYS 1004.
- Completion of PHYS 1002 will satisfy the requirement for ECOR 1101.
- Completion of ELEC 1908 will satisfy the requirement for ECOR 1010.

Transferring after completion of Engineering Physics second year:

- PHYS 2202 or PHYS 2604 can be used to satisfy the 0.5 credit 4th year requirement as a science elective.
- Credit for one of PHYS 2202 or PHYS 2604 will be lost¹.
- 1.0 Electrical program credits (1.0 credit of CSE) will be missing. The 4th year requirements will have been reduced by 0.5 credits, so the 1.0 CSE credits are best done 1.0 credits in 3rd year or 0.5 in each of 3rd and 4th year.

Transferring after completion of Engineering Physics third year:

- Completion of SYSC 3905 will satisfy ELEC 3905.
- Credit for PHYS 3606, PHYS 3701 and PHYS 3807 will be lost¹.
- 2.0 Electrical program credits (ELEC 3905, SYSC 3006 and 1.0 credit of CSE) will be missing, with 0.5 credit of 4th year completed (PHYS 2202 or PHYS 2604). The remaining 7.5 credits can therefore not be completed in a single year. Attempting to complete in 1.5 years is problematic since the 4th year project is a year-long course and priority is given to students who are in their last year of study. Thus, it may take two years to complete the Electrical program.

¹ The course(s) will become “extra to the degree” and will no longer be included in the CGPA.

Electrical/Engineering Physics Program Requirement Comparison

Year	Electrical specific	Common	Engineering Physics specific
1	PHYS 1004, ECOR 1010, ECOR 1101 0.5 credit CSE	CHEM 1101, MATH 1004, MATH 1005, MATH 1104, ECOR 1606 0.5 credit CSE	<u>PHYS 1001</u> , <u>PHYS 1002</u> , <u>ELEC 1908</u> , ALSS 1000
2	ALSS 1000 0.5 credit CSE	ECOR 2606, MATH 2004, MATH 3705, SYSC 2002, SYSC 2004, ELEC 2501, ELEC 2507, ELEC 2607	<u>PHYS 2202</u> , <u>PHYS 2604</u> ¹
3	ELEC 3905, SYSC 3006	STAT 3502, ELEC 3105, ELEC 3500, ELEC 3509, ELEC 3908, ELEC 3909, SYSC 3501, SYSC 3600	PHYS 3606, PHYS 3701, PHYS 3807
4	ELEC 4601 3.0 credits from: AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or Systems and Computer(SYSC) or Electronics (ELEC) at the 4000-level 0.5 credit either in Science Electives for Electrical Engineering or in ENVE, CIVE, IDES, MAAE, AERO, MECH at the 2000-level or above, AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or any Systems and Computer (SYSC) or Electronics (ELEC) at the 4000-level	ECOR 3800 Project course (1.0 credit) 0.5 credit CSE	1.5 credits in PHYS 4007, PHYS 4707, ELEC 3905 1.0 credit in Physics (PHYS) at the 4000-level, which must include one of: PHYS 4203, PHYS 4208, PHYS 4409, PHYS 4508, PHYS 4807 1.0 credit in Electronics (ELEC) at the 4000-level, which must include one of: ELEC 4503, ELEC 4505, ELEC 4506, ELEC 4601, ELEC 4609, ELEC 4700, ELEC 4502, ELEC 4509, ELEC 4702, ELEC 4706, ELEC 4707, ELEC 4708; 0.5 credit CSE

Boldface indicates common courses taken in different years; underline indicates courses that can be applied to the Electrical program.

¹ Credit for one of PHYS 2202 or PHYS 2604 may be used to satisfy the 0.5 credit fourth year requirements as a science elective.

Transfer from the Systems and Computer Engineering Program

The table on the following page compares the requirements of the two programs.

Transferring after completion of Systems first year:

- The 0.5 credit CSE can be taken in place of ALSS 1000 in 2nd year.

Transferring after completion of Systems second year:

- Completion of SYSC 2003 will satisfy the requirement for SYSC 3006 in 3rd year.
- Completion of MAAE 2101 will satisfy the 0.5 credit requirement in 4th year.
- Credit for SYSC 2001 will be lost¹.
- 1.5 Electrical program credits (ECOR 2606 and 1.0 credit of CSE) will be missing. Since 0.5 credits from both 3rd and 4th year will have been completed, these 1.5 credits are best spread out as 1.0 extra credit in 3rd year (becoming 5.5 credits), and 0.5 credits in 4th year (remaining 6.0 credits).

Transferring after completion of Systems third year:

- Beginning Fall 2003, SYSC 3601 cannot be used to satisfy ELEC 4601.
- Completion of SYSC 3905 will satisfy ELEC 3905.
- Credit for SYSC 3100 can be applied to the 4th year engineering electives.
- Credit for SYSC 3001, SYSC 3303 and SYSC 3601 will be lost¹.
- 3.5 Electrical program credits (ECOR 2606, ELEC 3105, ELEC 3509, ELEC 3908 ELEC 3909, and 1.0 credit of CSE) will be missing, with 1.5 credit of 4th year completed (ECOR 3800, MAAE 2101 and SYSC 3100). The remaining 8.0 credits can therefore not be completed in a single year. Attempting to complete in 1.5 years is problematic since the 4th year project is a year-long course and priority is given to students who are in their last year of study. Thus, it may take two years to complete the Electrical program.

¹ The course(s) will become “extra to the degree” and will no longer be included in the CGPA.

Electrical/Computer Systems Program Requirement Comparison

Year	Electrical specific	Common	Systems specific
1	0.5 credit CSE	CHEM 1101, MATH 1004, MATH 1005, MATH 1104, PHYS 1004, ECOR 1010, ECOR 1101, ECOR 1606 0.5 credit CSE	ALSS 1000
2	ECOR 2606, ALSS 1000 0.5 credit CSE	MATH 2004, MATH 3705, SYSC 2002, SYSC 2004, ELEC 2501, ELEC 2507, ELEC 2607	<u>MAAE 2101</u> , SYSC 2001, <u>SYSC 2003</u>
3	ELEC 3105, ELEC 3509, ELEC 3908, ELEC 3909, SYSC 3006	STAT 3502, SYSC 3501, SYSC 3600, ELEC 3500, (SYSC 3905/ELEC 3905)	ECOR 3800 , SYSC 3001, <u>SYSC 3100</u> , SYSC 3303, SYSC 3601
4	ELEC 4601, ECOR 3800 3.0 credits from: AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or Systems and Computer(SYSC) or Electronics (ELEC) at the 4000-level 0.5 credit either in Science Electives for Electrical Engineering or in ENVE, CIVE, IDES, MAAE, AERO, MECH at the 2000-level or above, AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or any Systems and Computer (SYSC) or Electronics (ELEC) at the 4000-level	Project course (1.0 credit) 0.5 credit CSE	2.5 credits in SYSC 4507, SYSC 4602, SYSC 4800, SYSC 4805, ELEC 4705 1.5 credits from: MECH 4503, ECOR 2606 or Systems and Computer (SYSC) or Electronics (ELEC) at the 3000-level or above 0.5 credit CSE

Boldface indicates common courses taken in different years; underline indicates courses that can be applied to the Electrical program.

Transfer from the Communications Engineering Program

The table on the following page compares the requirements of the two programs.

Transferring after completion of Communications first year:

- The first year programs are identical.

Transferring after completion of Communications second year:

- Completion of SYSC 2003 will satisfy the requirement for SYSC 3006 in 3rd year.
- Completion of SYSC 2500 will satisfy the requirement for SYSC 3600 in 3rd year.
- Credit for SYSC 2001 will be lost¹.
- 1.5 Electrical program credits (ECOR 2606, SYSC 2004 and 0.5 credit of CSE) will be missing. 1.0 credits from 3rd year will have been completed. The best strategy would be to clear all 1.5 credits in a 5.5 credit third year to avoid overloading the normal 6.0 credit fourth year.

Transferring after completion of Communications third year:

- Credit for SYSC 4405 can be applied to the 4th year engineering electives.
- Completion of STAT 2605 will satisfy the requirement for STAT 3502.
- Completion of SYSC 3503 will satisfy the requirement for SYSC 3501.
- Credit for SYSC 3502 will be lost¹.
- 2.0 Electrical program credits (ECOR 2606, ELEC 3105, ELEC 3905 and ELEC 3908) will be missing, with 1.0 credit of 4th year completed (ECOR 3800, SYSC 4405). It would be very difficult, both from workload and scheduling points of view, to complete the remaining 7.0 credits in a single year. Attempting to complete in 1.5 years is problematic since the 4th year project is a year-long course and priority is given to students who are in their last year of study. Thus, it may take two years to complete the Electrical program.

¹ The course(s) will become “extra to the degree” and will no longer be included in the CGPA.

Electrical/Communications Program Requirement Comparison

Year	Electrical specific	Common	Communications specific
1		CHEM 1101, MATH 1004, MATH 1005, MATH 1104, PHYS 1004, ECOR 1010, ECOR 1101, ECOR 1606 1.0 credit CSE	
2	ECOR 2606, SYSC 2004 0.5 credit CSE	ALSS 1000, MATH 2004, MATH 3705, SYSC 2002, ELEC 2501, ELEC 2507, ELEC 2607	SYSC 2001, <u>SYSC 2003</u> , <u>SYSC 2500</u>
3	STAT 3502, ELEC 3105, ELEC 3905, ELEC 3908, SYSC 3006, SYSC 3501, SYSC 3600	ELEC 3500, ELEC 3509, ELEC 3909	<u>STAT 2605</u> , ECOR 3800 , SYSC 2004 , SYSC 3502, <u>SYSC 3503</u> , <u>SYSC 4405</u> 0.5 credit CSE
4	ELEC 4601, ECOR 3800 3.0 credits from: AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or Systems and Computer(SYSC) or Electronics (ELEC) at the 4000-level 0.5 credit either in Science Electives for Electrical Engineering or in ENVE, CIVE, IDES, MAAE, AERO, MECH at the 2000-level or above, AERO 4300, MECH 4403, MECH 4503, MECH 4705, SYSC 3100, SYSC 3200, or any Systems and Computer (SYSC) or Electronics (ELEC) at the 4000-level	Project course (1.0 credit) 0.5 credit CSE	3.0 credit in SYSC 4604 , SYSC 4504, SYSC 3905, SYSC 4602, SYSC 4700, SYSC 4701 0.5 credits in Breadth Electives 0.5 credits in Breadth Electives or Systems and Computer (SYSC) or Electronics (ELEC) at the 4000-level 0.5 credit CSE

Boldface indicates common courses taken in different years; underline indicates courses that can be applied to the Electrical program.

Transfer from Other Programs

The first year requirements of most other programs are similar to the Electrical program, so transfer after completion of first year does not generally involve major problems. However, after first year most of the other programs diverge strongly from the Electrical program, so transfer after second year will likely require most of a year to get back on track. Transfer after third year will likely require the better part of two years to get back on track.