

# OPTICAL

MCC  
ENGINEERING  
TECHNOLOGIES  
DEPARTMENT

## Looking for an Exciting and Rewarding Optical Technician Position?

### *OPTICAL TECHNOLOGY A.A.S DEGREE PROGRAM*

#### Program Information

##### Job Possibilities:

Optical systems technicians work with scientists and engineers in research, development, design, manufacturing and quality control. They perform testing and evaluation of optical components and systems.

##### Program Description:

Courses currently offered within the program deal with geometrical optics, optical instruments, metrology, optical fabrication, wave optics and applications, fiber optics, electro-optics, laser applications and holography and photo/imaging science. The courses in the curriculum are designed to meet the needs of both the people who have no previous experience in the field and those already employed who wish to upgrade or improve their skills.

Heavy emphasis is placed on laboratory skills, and a minimum of half of the total course-time is devoted to implementing experimental techniques. Additionally, the concept of a team approach for problem solving is strongly developed throughout the program.

#### We Offer a Technical Program Just For You!

With programs in Electrical, Mechanical, Optical, and Construction Tech at MCC we have just the right 2-yr A.A.S or certificate program for your future career!

Monroe Community College  
Engineering Technologies Dept.  
1000 East Henrietta Rd.  
Rochester, NY 14623

THERE'S MORE TO YOU.  
THERE'S MORE TO MCC.

[www.monroecc.edu/go/et](http://www.monroecc.edu/go/et)

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# OPTICAL TECHNOLOGY

## OPTICAL TECHNOLOGY A.A.S DEGREE PROGRAM Course Listing

<b>TRADITIONAL OPTICS OPTION</b>	
<b>FIRST SEMESTER</b>	
MTH 140 Technical Mathematics I*	3
TEK 101 Computer Applications for Technicians	2
OPT 131 Optical Elements and Ray Optics	4
OPT 135 Measurement and Analysis	4
ENGLISH ELECTIVE	3
Physical/Health Education	1
<b>Total</b>	<b>17</b>
<b>SECOND SEMESTER</b>	
ENG 101 College Composition	3
MTH 141 Technical Mathematics II*	3
PHY 131 Applied Physics I*	4
OPT 151 Optical Instruments and Testing	4
OPT 153 Fiber Optics	3
<b>Total</b>	<b>17</b>
<b>THIRD SEMESTER</b>	
MTH 175 Precalculus Mathematics with Analytic Geometry	4
OPT 211 Wave Optics and Applications	4
OPT 213 Optical Processes	4
PHY 231 Applied Physics III*	4
SOCIAL SCIENCE ELECTIVE	3
<b>Total</b>	<b>19</b>
<b>FOURTH SEMESTER</b>	
OPT 201 Photo Science	4
OPT 215 Electro-Optical Devices and Systems	5
OPT 231 Lasers: Technology and Applications	4
SOCIAL SCIENCE ELECTIVE	3
Physical/Health Education	1
<b>Total</b>	<b>17</b>
<b>TOTAL CREDITS</b>	<b>70</b>

<b>ELECTRO-OPTICS OPTION</b>	
<b>FIRST SEMESTER</b>	
ELT 111 Electronic Technology I	3
ELT 121 AC/DC Circuit Analysis	4
MTH 140 Technical Mathematics I*	3
TEK 101 Computer Applications for Technicians	2
OPT 131 Optical Elements and Ray Optics	4
ENG 101 College Composition	3
<b>Total</b>	<b>19</b>
<b>SECOND SEMESTER</b>	
ELT 102 Electric Circuit Analysis II	5
ELT 112 Electronic Technology II	5
MTH 141 Technical Mathematics II*	3
ENGLISH ELECTIVE	3
OPT 153 Fiber Optics	3
<b>Total</b>	<b>19</b>
<b>THIRD SEMESTER</b>	
MTH 175 Precalculus Mathematics with Analytic Geometry	4
ELT 202 Pulse and Digital Circuits	4
OPT 135 Measurement and Analysis	4
OPT 211 Wave Optics and Applications	4
SOCIAL SCIENCE ELECTIVE	3
<b>Total</b>	<b>19</b>
<b>FOURTH SEMESTER</b>	
OPT 215 Electro-Optical Devices and Systems	5
SOCIAL SCIENCE ELECTIVE	3
PHY 131 Applied Physics I	4
ELT 206 Digital Systems and Microprocessors	5
Health/Physical Education	2
<b>Total</b>	<b>19</b>
<b>TOTAL CREDITS</b>	<b>76</b>

\* Students with an excellent high school mathematics and physics record may wish to select a more advanced mathematics and physics program following consultation with the appropriate department.



OPTICAL SYSTEMS TECHNOLOGY AT MCC

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