RCTC PROGRAM PLAN

CLINICAL NEUROPHYSIOLOGY TECHNOLOGY
Associate in Applied Science
An Affiliated Program with the Mayo Clinic School of Health Sciences

I. MINNESOTA TRANSFER CURRICULUM (MNTC)/
GENERAL EDUCATION REQUIREMENTS..................................................25 CREDITS
GOAL 1: WRITTEN AND ORAL COMMUNICATION .............................................7 CR
COMM 1114, Fundamentals of Public Speaking, 3 cr
ENGL 1117, Reading and Writing Critically I, 4 cr

GOAL 2: CRITICAL THINKING MAY BE MET BY ANY COURSE IN MNTC 1-10 GOALS

GOAL 3: NATURAL SCIENCES .................................................................12 CR
BIOL 1110, Human Biology, 4 cr
BIOL 1216, Anatomy and Physiology of the Nervous and Respiratory Systems, 2 cr
CHEM 1101, Elements of Chemistry, 3 cr
PHYS 1103, Principles of Physics, 3 cr

GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES ............3 CR
PSYC 1611, Psychology of Adjustment, 3 cr
OR
PSYC 2618, General Psychology, 4 cr

GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY ................3 CR
RECOMMENDED:
PHIL 1135, Bioethics, 3 cr

II. MAYO CLINIC CNT CORE REQUIREMENTS..........................................56 CREDITS
MONTHS 1-12 Mayo courses:
CNT 1101, Orientation to CNT, 3 cr
CNT 1102, CNT Techniques EEG, 2 cr
CNT 1103, CNT Techniques NCS, 2 cr
CNT 1104, CNT Techniques EP, 2 cr
CNT 1105, CNT Techniques Autonomic, 2 cr
CNT 1106, CNT Techniques PSG, 2 cr
CNT 1110, Instrumentation, 2 cr
CNT 1112, Applied Concepts I EEG, 2 cr
CNT 1113, Applied Concepts II NCS, 2 cr
CNT 1114, Orientation to the Clinical Laboratory, 2 cr
CNT 2210, Neurophysiology Lecture Series, Part I, 1 cr

MONTHS 13-24
CNT 2211, Neurophysiology Lecture Series, Part II, 4 cr
CNT 2220, Clinical Practice EEG I**, 3 cr
CNT 2221, Clinical Practice EEG II**, 3 cr
CNT 2222, Clinical Practice EEG III**, 3 cr
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CNT 2230, Clinical Practice NCS I**, 3 cr  
CNT 2231, Clinical Practice NCS II**, 3 cr  
CNT 2240, Clinical Practice EP/NCS**, 3 cr  
CNT 2250, Clinical Practice Autonomic**, 3 cr  
CNT 2260, Clinical Practice PSG I**, 3 cr  
CNT 2261, Clinical Practice PSG II**, 3 cr  
CNT 2270, Clinical Practice Elective**, 3 cr  

**TOTAL** ................................................................................................................................................................................................. 81 CREDITS

## CLINICAL NEUROPHYSIOLOGY TECHNOLOGY COURSE SEQUENCE

LENGTH: 24 months

### FALL SEMESTER, YEAR 1 (RCTC AND MAYO)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BIOL 1110</td>
<td>Human Biology</td>
<td>4 cr</td>
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<tr>
<td>CHEM 1101</td>
<td>Elements of Chemistry</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHIL 1135</td>
<td>Ethics</td>
<td>3 cr</td>
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<tr>
<td>PHYS 1103</td>
<td>Principles of Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>CNT 1101</td>
<td>Orientation to CNT</td>
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**TOTAL** 16 CR

### SPRING SEMESTER, YEAR 1 (RCTC AND MAYO)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>BIOL 1216</td>
<td>Anatomy &amp; Physiology of the Nervous System</td>
<td>2 cr</td>
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<tr>
<td>ENGL 1117</td>
<td>Reading &amp; Writing Critically I</td>
<td>4 cr</td>
</tr>
<tr>
<td>PSYC 1611</td>
<td>Psychology of Adjustment</td>
<td>3 cr</td>
</tr>
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<td>2 cr</td>
</tr>
<tr>
<td>CNT 1110</td>
<td>CNT Instrumentation</td>
<td>2 cr</td>
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**TOTAL** 18 CR

### SUMMER SESSION (MAYO)

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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT 1104</td>
<td>CNT Techniques EP</td>
<td>2 cr</td>
</tr>
<tr>
<td>CNT 1105</td>
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<td>Applied Concepts I</td>
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<td>CNT 1113</td>
<td>Applied Concepts II</td>
<td>2 cr</td>
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<tr>
<td>CNT 1114</td>
<td>Orientation to the Clinical Laboratory</td>
<td>2 cr</td>
</tr>
<tr>
<td>CNT 2210</td>
<td>Neurophysiology Lecture Series, Part I</td>
<td>1 cr</td>
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</tbody>
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**TOTAL** 13 CR

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**WWW.RCTC.EDU**  
851 30th Avenue SE | Rochester MN 55904 | 1-800-247-1296  
Rochester Community and Technical College  
A member of the Minnesota State system and an Affirmative Action/Equal Opportunity College.  
RCTC provides accessible, affordable, quality learning opportunities to serve a diverse and growing community.
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## YEAR 2  THESE COURSES WILL BE TAKEN DURING THE FALL, SPRING, AND SUMMER SEMESTERS AT MAYO CLINIC SCHOOL OF HEALTH SCIENCES:

MONTHS 13-24

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<tbody>
<tr>
<td>CNT 2211</td>
<td>Neurophysiology Lecture Series, Part II</td>
<td>4 cr</td>
</tr>
<tr>
<td>CNT 2220</td>
<td>Clinical Practice EEG I**</td>
<td>3 cr</td>
</tr>
<tr>
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<td>Clinical Practice Elective*</td>
<td>3 cr</td>
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**TOTAL 34 CR**

**Clinical Hours: 64 hours = 1 semester credit**

## ADDITIONAL NOTES:

**PURPOSE:** This program educates graduates to work under the supervision of physicians to perform tests that assist physicians in the diagnosis and evaluation of diseases of the brain, peripheral and autonomic nervous system and disorders of sleep and wakefulness. The technologist must be able to analyze data online making certain that it is viable and interpretable. Neurodiagnostic studies are performed in a laboratory, emergency room, operating room, intensive care unit, special monitoring units or at the patient’s bedside.

The areas of study are electroencephalography, nerve conduction studies, polysomnography, autonomic testing and evoked potentials. Electroencephalography, spontaneous electrical activity of the brain recorded from the scalp, can determine changes in brain activity useful in diagnosing brain disorders. Nerve conduction studies, stimulus-induced responses recorded from peripheral nerves and muscles in the face, arms or legs, test to see how fast and how well the nerves send messages. Polysomnography, spontaneous activity recorded from the lungs, brain, muscle and heart, diagnosis and treats sleep-related disorders such as narcolepsy and sleep apnea. Autonomic testing measures involuntary nervous system function that controls blood pressure, heart rate, sweating and influence pain. Evoked potentials, stimulus induced responses from the sensory system, measures central nerve conduction time in disorders such as multiple sclerosis.

**ADMISSION:** Students are admitted into the Clinical Neurophysiology Technology Program through the Mayo Clinic School of Health Sciences. The application for admission is online and must be obtained from the Mayo Clinic School of Health Sciences and submitted no later than February 1. The online application may be accessed at [http://www.mayo.edu/mshs/careers/clinical-neurophysiology-technology/clinical-neurophysiology-technology-program-minnesota](http://www.mayo.edu/mshs/careers/clinical-neurophysiology-technology/clinical-neurophysiology-technology-program-minnesota). Following appointment to the program by the Mayo Clinic School of Health Sciences, students must
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apply to RCTC. Admission is competitive. It is based on previous education, work experience, goal statement, letters of reference, and interview.

PROGRAM ENTRANCE REQUIREMENTS:
• Required: High school diploma (equivalent acceptable) or be a high school senior who expects to graduate by the time the program begins.
• Preferred: Graduated in the upper one-half of the high school graduating class with a 2.8 GPA or higher.

Biology* and Chemistry* and Mathematics*
• Required: Completed one year of high school biology, or RCTC Biology 1101, or the equivalent college course, with a grade of "C" or better.
• Preferred: Completed one year of high school chemistry, or RCTC Chemistry 1101, or the equivalent college course, with a grade of "C" or better.

Mathematics*
• Required: Completed high school Algebra II, or RCTC Math 0099, or the equivalent college courses, with a grade of "C" or better.

*Science and math prerequisite courses must have been completed within five years of your application to the program.

COLLEGE READINESS/PLACEMENT:
• Required: Students must have academic skills that will allow them to enroll in RCTC Physics 1103 and English Composition 1117. Evidence of your academic readiness for these college-level courses can be demonstrated by adequate ACT scores or by completing the Accuplacer assessment at RCTC. We recommend that students submit both ACT scores and Accuplacer results with your application.
• GPA: Applicants with some college-level courses completed should have at least a 2.8 GPA or higher.

JOB SHADOW:
• Required: Contact Jan W. Buss at Buss.Jan@mayo.edu to schedule a job shadow. This experience must be scheduled and completed before the Feb. 1 application deadline. Be prepared to show evidence that you have met these prerequisites.

COMPUTER SKILLS:
• Required: Must demonstrate above-average competency in computer skills. Must be able to use a computer for online curriculum and patient care activities. For students without basic computer skills upon entering the program, a computer course may be required.
INTERNATIONAL APPLICANTS:
U.S. Citizenship or Permanent Immigrant Status is required for admission to the Clinical Neurophysiology Technology Program.

Proof of completion of a CPR course is required prior to beginning spring semester of first year and must be current through either the American Heart Association Cardiopulmonary Resuscitation & Emergency Cardiac Care for Health Care Provider or the Red Cross Basic Life Support Course.

Registration and Sequence of Courses: This is a 24-month program consisting of 81 credits. During the first two semesters at RCTC, students will take general education courses as well as CNT courses. After that time all the coursework is at the Mayo Medical Center. Course sequences are specified on the Degree Program Sheet.

Program Completion: Those who complete the program will be awarded a Certificate of Completion by Mayo Clinic School of Health Sciences and an Associate in Applied Science Degree by RCTC.

Revised: 12/28/2016
Implementation: Spring 2017