Statistics Regarding the Profession

The Bureau of Labor and Statistics predicts 40,400 future job openings in Neurodiagnostic Technology and is a “Bright Outlook” profession according to the O-Net Database due to the faster than average projected growth (http://www.onetonline.org/link/summary/29-2099.01).

According to the Washington Post job listings, there are over 600 nationwide job openings in neurodiagnostic technology as of May 2013, up from 500 in March of 2013 (http://nationaljobs.washingtonpost.com/a/all-jobs/list/q-neurodiagnostic+technician).

Employment opportunities include hospitals, specialized sleep and epilepsy labs, private practice, educational institutions, research facilities, and equipment design, sales, and manufacturing companies.

ASET Salary Survey Information

Breakdown by Education Level
- Education requirements for current position: 24% of respondents indicated a Bachelor’s degree
- Highest level of education attained: 29% of respondents indicated a Bachelor’s degree
- Employer paid professional development: 20% of respondents indicated that their employer pays for college tuition
- Highest level of education in self-employed or contracted neurodiagnostic professional: 19% of respondents indicated a Bachelor’s degree

Salaries by Education
- The following information was gleaned from the salary survey respondents with Bachelor’s degrees:
  o The mean salary: $67,045
  o The median salary: $61,000
  o The mode: $61,000
  o The range: $22,000 – $250,000
- In contrast, those with Associate degrees:
  o The mean salary: $57,840
  o The median salary: $61,000
  o The mode: $46,000
  o The range: $28,000 – $109,000
American Board of Registration of Electroencephalographic and Evoked Potential Technologists (ABRET) Examinations - http://abret.org/

ABRET EXAMINATIONS
Candidate Performance
2012

ELECTROENCEPHALOGRAPHY
EEG Part 1 Examination

One of the following must be met and verified for candidates to be eligible to take the written EEG exam.
1) Candidate must be a student or graduate of a CAAHEP-accredited neurodiagnostic program
2) Candidate must have at least an associate’s degree plus two years of experience

Pass Rate by Eligibility Route (2003-2012)
CAAHEP Program Student/Graduate 63% Passed
Associate’s Degree 48% Passed
On the Job training/3 years of experience 37% Passed

Pass Rate by Highest Level of Education (2003-2012)
GED/High School 33% Passed
Vo-tech/Associate Degree 36% Passed
Bachelor’s Degree 62% Passed
Advanced Degree 73% Passed

EEG Written Exam - Historical Data
2008 = 366 Candidates; 50% Passed
2009 = 409 Candidates; 68% Passed
2010 = 439 Candidates; 44% Passed
2011 = 754 Candidates; 44% Passed
2012 = 296 Candidates; 73% Passed
NEUROPHYSIOLOGIC INTRAOPERATIVE MONITORING
(credential: CNIM)

As of December 31, 2012 there were 2566 total CNIMs

Eligibility for CNIM Path I Exam is an R. EEG T. or R. EP T. credential plus documentation of 150 cases monitored.

Eligibility for CNIM Path II Exam is a minimum of a bachelor’s degree plus documentation of 150 cases monitored.

<table>
<thead>
<tr>
<th>Education</th>
<th>High School</th>
<th>Vo-tech/AS</th>
<th>Bachelors</th>
<th>Advanced Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass Rate (REEGT &amp;/or REPT)</td>
<td>2010 – 41%</td>
<td>2010 – 56%</td>
<td>2010 – 69%</td>
<td>2010 – 50%</td>
</tr>
<tr>
<td></td>
<td>2012 – 42%</td>
<td>2012 – 65%</td>
<td>2012 – 72%</td>
<td>2012 – 83%</td>
</tr>
<tr>
<td>Path II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass Rate (Bachelors degree)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2010 – 40%</td>
<td>2010 – 57%</td>
<td>2010 – 58%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2011 – 46%</td>
<td>2011 – 57%</td>
<td>2011 – 57%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2012 – 57%</td>
<td>2012 – 62%</td>
<td>2012 – 62%</td>
<td></td>
</tr>
</tbody>
</table>

The most common reasons given for taking the CNIM exam:
1 – Job Requirement
2 – Professional Advancement
3 – Personal Goal
4 – Salary

LONG TERM MONITORING (Credential: CLTM)
The following must be met and verified for candidates to be eligible to take the CLTM Exam:
1) One year as an R. EEG T.
and
2) One year of monitoring experience

CLTM Examination 2012
34 candidates; 53% passed (First time candidates 56% pass rate; Repeaters 43% pass rate)

<table>
<thead>
<tr>
<th>Pass rate by Education</th>
<th>Year</th>
<th>High School</th>
<th>Vo-tech/AS</th>
<th>Bachelors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>50%</td>
<td>67%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>50%</td>
<td>42%</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>45%</td>
<td>52%</td>
<td>91%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>57%</td>
<td>51%</td>
<td>67%</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>29%</td>
<td>56%</td>
<td>70%</td>
</tr>
</tbody>
</table>
Neurodiagnostic Technology programs are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

CAAHEP requires each allied health profession to maintain a committee to develop educational criteria and conduct program assessments. The CAAHEP committee that works with neurodiagnostic programs is called the “Committee on Accreditation for Education in Neurodiagnostic Technology” (CoA-NDT) http://coa-ndt.org/

The primary function of the CoA-NDT is to review and evaluate educational programs in Neurodiagnostic Technology to determine compliance with the established Standards and Guidelines for an Accredited Educational Program in Neurodiagnostic Technology. Recommendations regarding program accreditation are forwarded to the Commission on Accreditation of Allied Health Education Programs (CAAHEP) for action.

Following an initial application, the first step in the accreditation process is development and submission of a self-study document and an initial site visit. Continuing accreditation involves submission of an Annual Report that demonstrates competencies in the three learning domains (cognitive, affective and psychomotor) which are measured by various means in the course and clinical work and overall learning outcomes. The outcomes are measured by the graduate competencies, job placement and national registry exam statistics of program graduates.

**Employment statistics for graduates of CAAHEP accredited Neurodiagnostic Programs:**

This report reflects a 3-year average, data for the graduating classes of 2009 – 2011. The average employment rate is 92.1%, with a range of 78.3% - 100%. The mode is 100%, with more than 50% of the programs reporting 100% employment for their graduates.

Number of graduates from CAAHEP accredited programs by year:
- 2011: 180
- 2010: 161
- 2009: 142

Statistics as of May 2013:
- 25 CAAHEP accredited NDT programs nation-wide (4 of these are online programs).

CAAHEP recently approved the Standards and Guidelines for the Accreditation of Educational Programs in Neurophysiologic Intraoperative Monitoring. Applications for Initial Accreditation of new programs began June 3rd, 2013 (http://www.coa-ndt.org).

**CAAHEP’s new requirements for all Neurodiagnostic Technology Program Directors to hold Bachelor’s Degrees:** According to the 2008 Standards and Guidelines for the Accreditation of Educational Programs in Neurodiagnostic Technology, Program Directors must possess at least a Bachelor’s Degree with clinical and teaching experience. By January 1, 2014 all program directors, including those who are grandfathered, must have a Bachelor’s degree.

There are a total of 25 Neurodiagnostic Technology training programs, CAAHEP accredited and non-accredited, in the USA as of February, 2013. This figure excludes the military program at Fort Sam Houston since this program excludes open enrollment for the general public. As of February, 2013 there were 265 students enrolled in these programs, nation-wide. It is important to anticipate some student
attrition when anticipating the number of future graduates from this group. Contrast this with the 600 jobs listed nationwide in the Washington Post in May of 2013.

Growth of Neurodiagnostic Technology (NDT) programs accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1995-2012

Model Programs

Neurodiagnostic Technology programs are most commonly associate degree programs. There is a need for new associate degree programs as well as higher degrees, such as bachelor’s degree programs and post-bachelor’s certificates. Examples of new formal education initiatives include the following:

- CAAHEP accredited Neurodiagnostic Technology Associate Degree Programs are listed at www.caahep.org
- The University of North Carolina is offering a new bachelor’s degree program in Neurodiagnostics and Sleep Science
“The Neurodiagnostics and Sleep Science Bachelor's Degree Program is offered by the University of North Carolina at Charlotte's Department of Kinesiology, with collaborative coursework offered by The University of North Carolina at Chapel Hill's Department of Allied Health Sciences. The program is a degree completion program and is offered via distance education. Graduates of the NDSS program will hold influential positions in clinical, educational, and research settings.” Visit the website for more information: http://www.med.unc.edu/ahs/ndss

- The University of Michigan School of Kinesiology is offering a specialized tract through its Movement Science curriculum to focus on Intra-operative Monitoring, including clinical rotations offered through the Department of Neurology at the University Hospital http://kines.umich.edu/programs/movement-science/ionm, granting students a Bachelor’s Degree. This program will be seeking accreditation through the CoA-NDT IONM program (http://www.coa-ndt.org).

American Council on Education listing for ASET On-line Course Curriculum

ASET Earns College Credit Recommendation of Online Curricula

The American Council on Education’s College Credit Recommendation Service (ACE CREDIT)® has evaluated and recommended college credit for the online curriculums offered by ASET in EEG, NCS, IONM and LTM/ICU Monitoring. Founded in 1918, the American Council on Education is the major coordinating body for all the nation's higher education institutions, representing more than 1,600 college and university presidents, and more than 200 related associations, nationwide. It provides leadership on key higher education issues and influences public policy through advocacy.

The Council’s ACE CREDIT program, established in 1974, connects workplace learning with colleges and universities by helping adults gain access to academic credit at colleges and universities for formal courses and examinations taken in the workplace or other settings outside traditional higher education. With over 35,000 courses reviewed, the American Council on Education is the national leader in the evaluation process for education and training obtained outside the classroom. For more than 30 years, colleges and universities have trusted the ACE CREDIT program to provide reliable course equivalency information to facilitate their decisions to award academic credit. For more information, visit the Council’s ACE CREDIT website at www.acenet.edu/credit.

As published in the American Council on Education’s National Guide to College Credit for Workforce Training (http://www2.acenet.edu/credit/?fuseaction=browse.main), ASET is proud to announce that we have been awarded the following number of recommended college credits for our online course curriculums:

- EEG 101-112 plus proctored exam: In the lower-division baccalaureate/associate degree category, 11 semester hours in basic and clinical application of EEG.
- NCS 101-112 plus proctored exam: In the lower-division baccalaureate/associate degree category, 8 semester hours in nerve conduction study
• LTM 101-109 plus proctored exam: in the upper-division baccalaureate degree category, 12 semester hours in long term and neuro-critical care monitoring
• IONM 100-110 plus proctored exam: In the upper-division baccalaureate degree category, 20 semester hours in intraoperative neuromonitoring

Technologists must pass all courses within a specific curriculum to be eligible for college credit recommendations. In addition, they must pass a comprehensive proctored exam which covers all subjects within the curriculum. The proctored exam is arranged through ASET and is not the same as a credentialing exam provided by ABRET, AAET, or AANEM. Arrangements to take the proctored exam in your locality can be made through Maggie Marsh-Nation, ASET’s online education coordinator (830-895-7460 or maggiemn@me.com). A nominal fee may be charged by the institution providing the testing site for the proctored exam. If you have already taken a complete ASET on-line course curriculum, regardless of how many years ago, you only need to take and pass the proctored exam for that curriculum in order to be eligible for college credit recommendations.

While acceptance of ACE CREDITS is not guaranteed at every college or university, there are more than 2,000 institutions in the ACE CREDIT College and University Network that consider ACE CREDIT recommendations for transfer to degree programs. For the list of these institutions visit http://www2.acenet.edu/programs/ccrs/adult_learners/. Other colleges and universities, not listed, may also accept ACE credits. It is up to the discretion of individual institutions whether to accept credit on a case-by-case basis. For answers to frequently asked questions about college credit recommendations, visit http://www2.acenet.edu/credit/?page=search_faq.

The American Council on Education also maintains an ACE CREDIT Registry and Transcript System through which you can keep an account of your ACE-reviewed training or order an official ACE CREDIT transcript. Once a participant takes all the classes in a course of study such as EEG 101-112, NCS 101-112, LTM 101-109 or IONM 100-110, and then sits for and passes the proctored exam for the course of study, the participant’s name will be entered into the ACE CREDIT Transcript System and an automated email with instructions will be sent out from the American Council on Education to the participant explaining how to use the transcript service. For more information on the ACE CREDIT transcript system, visit https://www2.acenet.edu/credit/?fuseaction=transcripts.main.

In addition to having a rigorous third-party evaluation of the educational content and quality of the ASET online courses, ACE CREDIT recommendation of college credit also brings additional advantages. Depending on the per semester hour tuition cost of the institution in which you are planning on enrolling, there may be a cost-savings to you by enrolling in the ASET online curriculum and then having those semester hours transferred to your institution. There also may be a time-savings by taking the ASET online courses, which are accessible 24x7 year-round, compared to seated class time for the same number of semester hours. Finally, and perhaps most important, if your employer or institution no longer pays for continuing education training but does still provide reimbursement for college tuition, you might now be able to be reimbursed by your employer for the ASET online course registration fees and proctored exam since they are qualified for college credit recommendation. You are advised to check with your employer’s human resources or benefits department to determine if you will be eligible for reimbursement for the ASET online curriculum listed by ACE CREDIT.