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| --- | --- | --- | --- | --- |
| BIOGRAPHICAL SKETCH | | | | |
|  | | | | |
| NAME  Anderson, Brian Mark | | POSITION TITLE  Assistant Professor  Email  Brian\_Anderson@med.unc.edu | | |
| eRA Commons User Name  BrianMAnderson | |
| EDUCATION/TRAINING | | | | |
| INSTITUTION AND LOCATION | DEGREE/TRAINING | | MM/YY | FIELD OF STUDY |
| Georgia Institute of Technology | BS | | 5/15 | Nuclear and Radiological Engineering |
| UT Graduate School of Biomedical Sciences at Houston & UT MD Anderson Cancer Center  UT Graduate School of Biomedical Sciences at Houston & UT MD Anderson Cancer Center | S.M.S  Ph.D | | 9/17  10/17 | Medical Physics  Medical Physics |
|  |  | |  |  |
| UC San Diego | Residency | | 07/2023 | Therapeutic Medical Physics |
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A. Personal Statement

My PhD work is centered on the improvement of liver treatments with RF ablation therapy. This work can be broken down into several parts, the first of which was preliminary work with biomechanical models for assessment of colorectal liver metastasis ablation treatments at MD Anderson. A unique method of treatment assessment using biomechanical, model based image registration and deformation was used to determine if local recurrence and non-local recurrence could be determined based on imaging available during the treatment procedure. While this method proved useful, it was not clinically ideal due to the necessity of manual contours. This problem was addressed with the creation of a deep learning neural network to segment the liver in contrast and non-contrast enhanced CT images. This network will later be expanded to include gross disease, ablative zone, internal vasculature, and the individual segments of the liver. The final goal is to create a rapid, streamlined process which can assist in localization of the ablation needle, and identify in real time if sufficient ablation has been delivered.

I have continued to be successful in in the development and implementation of several deep learning/AI projects within the clinic both during my residency and in my clinical research position.

B. Positions and Honors

**Editorial and Review Activities**

Associate Editor: The International Journal of Medical Physics Research and Practice (2023-Present)

Ad hoc Associate Editor, The International Journal of Medical Physics Research and Practice (2020-2021)

Manuscript Reviewer, The International Journal of Medical Physics Research and Practice (2019-present)

**Honors/Awards/Grants**

AAPM Jack Krohmer Early Career Investigator Competition Winner – EPIDEEP: Predicting In-Vivo EPID Transit Images – a Deep Learning Approach (2022)

Alfred G. Knudson Jr. Outstanding Dissertation Award: $5,000 Award established by MD Anderson Cancer Center to honor the late Dr. Knudson in recognition of the top selected PhD dissertation. (2021)

AAPM Practical Big Data Workshop, Early Career Investigator – Impact Award (2021)

Dr. John J. Kopchick Fellowship (2020)

Society of Interventional Radiology: Allied Scientist Grant (2019)

Science Council Session, AAPM (2019)

Association of Science Communication 2019 Oral Competition: 1st place (2019)

People’s Choice Award for Medical Physics Slam AAPM annual meeting (2018)

1st Place Medical Physics Slam for South West AAPM annual meeting (2018)

Young Investigator Award for South West AAPM annual meeting (2018)

Early Career Medical Physicist Scholar from Winter Institute of Medical Physics (WIMP) (2018)

2nd place Student Research Retreat (2017)

Graduated with Highest Honors, Georgia Institute of Technology (2015)

AAPM Summer Fellowship: Commissioning of new Elekta LINAC (2014)

Recipient of the Presidents Undergraduate Research Award (PURA) (2013-2014)

**Positions and Employment**

Graduate Student Researcher, MDA Cancer Center, Houston, TX (2015-present)

AAPM Fellowship, St. Joseph’s Hospital, Eureka, CA (2014)

Research Assistant, Georgia Institute of Technology (2013-2014)

**Invited Talks**

1. Georgia Institute of Technology, invited lecturer: “Reimagining Medical Physics: A Deeper Dive into Deep Learning” (11/2023)
2. ESTRO-AAPM, Joint Symposium Session: “Estro-AAPM: Big data, Big Headache”, Title “Dealing with public datasets” (05/2023)
3. MD Anderson, Image Guided Cancer Therapy Workshop: “Getting Started with Artificial Intelligence”, Workshop and presentation (11/2021)
4. Winter Institute of Medical Physics: “Getting Started with Deep Learning: Dicom to Predictions” Workshop and presentation (02/2020)
5. MD Anderson, Image Guided Cancer Therapy Research Program: “How to Get Started in AI”, Workshop and presentation (01/2020)
6. North Central Chapter AAPM, Keynote Lecturer: “Introduction to Deep Learning: Everything I wish I’d known sooner” (11/2019)
7. Rice University, Guest Lecturer ELEC/ COMP 576: “Introduction to Deep Learning” (09/2019)
8. MD Anderson, Invited Speaker, Nuclear Medicine Practical Seminar: “Deep Learning in the Liver and our field” (05/2019)

**Other Experience and Professional Memberships**

Member, International Society for Optics and Photonics (SPIE) (2018)

Member, Medical Physicists for World Benefit (2017-present)

Member, American Association of Physicists in Medicine (2015 – present)

Member, American Nuclear Society (2012-present)

Internship, Shadowing of Medical Physicist, Catawba Valley Medical Center (2011)

C. Contributions to Science/Selected Peer-reviewed Publications

My contributions to science can be surmised in what I have done during my PhD work and my master’s thesis.

I first became interested in machine learning during my master’s work in 2015. The goal of my project was to create an autocontouring system which would accurately identify and differentiate cervical cancer nodes on non-contrast CT images. This work was important namely because 70% of the incidence and mortality burden of cervical cancer occurs in low- and middle-income countries where PET and contrast-CT images are not often available. It was particularly challenging due to the fact that non-contrast CT offers almost no distinctions between various tissues to try and distinguish the positively involved nodes. I’d never used machine learning before, or performed any kind of image analysis, so the project had a steep learning curve. Deciding my best approach to the problem took several iterations, and relied a lot on previous work for machine learning techniques in different sites, like the lungs. In the end, I aimed to reduce the search space as best I could, and identify unique characteristics of the cervical cancer nodes ellipsoidal or spherical shape. I gained experience using basic Demon’s based image registration to register a potential search space onto each patient. From there I used various features to classify the nodes and normal tissues, ultimately feeding the results into ensemble based machine learning models to identify the nodes.

Because of my master’s work, I was particularly interested in deep learning and modeling. My PhD in 2017 work was initially focused on improving ablative treated liver disease using biomechanical modeling. There are two main aspects which we hoped to improve: 1) the localization of the ablative needle for treatment in the intra-procedural images is difficult in the current standard of care, and 2) there is no method of mapping the disease onto the post-treatment imaging which takes into account the deformation of the liver. I was curious to see if deep learning could facilitate the process, as the biomechanical modeling requires segmentation of the liver, which can be a labor intensive process. I attended a Deep Learning course at the nearby Rice University, and for my final project I applied what I’d learning to the creation of a convolutional neural network for liver segmentation. Since then, the model has been refined and is currently in submission. The segmentation software has been set up as a server where contours can be generated on contrast and non-contrast images for anyone who desires them. Ideally this will soon be available to anyone at the institution who needs the liver segmented. It was this deep learning work which led me to pushing for a larger part of my PhD work to be involved in deep learning. My project now includes segmentation of disease, ablative margins, internal vasculature, and individual liver segments. I’m really excited by what I think will be the biggest challenge, the creation of a biomechanical vector field created from a deep learning network.

**Workshops**

UCSD Patient Communication for Medical Physicists Workshop: Two-day workshop focused on improving communication skills with physicists and patients. Paid actors simulated treatment meetings for patients receiving breast and prostate therapy (2022)

European Society of Interventional Radiology: Reliability in Percutaneous Tumour Ablation. (2019)

MD Anderson, Gulf Coast Consortia workshop, Rigor and Reproducibility: instructing researchers on the importance of robust research with unbiased analysis and reporting of results. (2019)

BigData4Imaging: Conference and workshop for training in machine and deep learning (2018)

**Papers**

Covington E, Suresh K, **Anderson B.M**, Barker M, Dess K, Price J, Moncio A, Vaccarelli M, Santanam L, Xiao Y, Mayo C *Perceptions on roadblocks to implementation of standardized nomenclature in radiation oncology: survey from TG-263U1* Radiation Oncology Physics (04/2024)

Gay S, Kisling K, **Anderson B.M,** Zhang L, Rhee D.J, Nguyen C., Netherton T., Yang J., Brock K., Jhingran A., Simonds H., Klopp A., Beadle B. M., Court L., Cardenas C. *Identifying the optimal deep learning architecture and parameters for automatic beam aperture definition in 3D radiotherapy* Radiation Oncology Physics 09/2023

Rigaud B, Weaver O.O, Dennison J. B, Awais M, **Anderson B. M,** Chiang T-Y. D, Yang W. T, Hanash S. M, Brock K. K *Deep Learning Models for Automated Assessment of Breast Density Using Multiple Mammographic Image Types* Cancers 10/2022

Woodland M, Wood J, **Anderson B.M**, Kundu S, Lin E, Koay E, Odisio B, Chung C, Kang H.C, Venkatesan A.M, Yedururi S, De B, Lin Y-M, Patel A.B, Brock K.K *Evaluating the Performance of StyleGAN2-ADA on Medical Images* Simulation and Synthesis in Medical Imaging. SASHIMI 2022. Lecture Notes in Computer Science, vol 13570. Springer, Cham 09/2022

Lin Y-M, **Anderson B.M**, et al. *Study Protocol COVER-ALL: Clinical impact of a volumetric image method for confirming tumour coverage with ablation on patients with malignant liver lesions* CardioVascular and Interventional Radiology 09/2022

He Y, **Anderson B.M**, Cazoulat G, Rigaud B, Almodovar-Abreu L, Pollard-Larkin J, Balter P, Liao Z, Mohan R, Odisio B, Svensson S, Brock KK. *Optimization of mesh generation for geometric accuracy, robustness, and efficiency of biomechanical-model-based deformable image registration* Medical Physics 08/2022

**Anderson B.M**, B. Rigaud, Y Lin, K Jones, H Kang, B Odisio, K Brock *Automated Segmentation of Colorectal Liver Metastasis and Liver Ablation on Contrast-Enhanced CT Images* Frontiers in Radiation Oncology 08/2022

Wahid K, He R, McDonald B, **Anderson B.M,** Salzillo T, Mulder S., Wang J., Sharafi C., McCoy L, Naser M., Ahmed S., Sanders K., Mohamed A., Ding Y, Wang J, Hutcheson K., Lai S., Fuller C., Van Dijk L. *MRI Intensity Standardization Evaluation Design for Head and Neck Cancer Quantitative Analysis Applications* Physics and Imaging in Radiation Oncology 10/2021

Cazoulat G, **Anderson B.M**, McCulloch MM, Rigaud B, Koay EJ, Brock KK *Detection of vessel bifurcations in CT scans for automatic objective assessment of deformable image registration accuracy* The International Journal of Medical Physics Research and Practice 08/2021

**Anderson B.M,** Lin YM, Lin EY, Cazoulat G, Gupta S, Kyle Jones A, Odisio BC, Brock KK *A novel use of biomechanical model based deformable image registration (DIR) for assessing colorectal liver metastases ablation outcomes* The International Journal of Medical Physics Research and Practice *Accepted* 07/2021

He Y, Cazoulat G, Wu C, Peterson C, McCulloch M, **Anderson B.M**, Pollard-Larkin J, Balter P, Liao Z, Mohan R, Brock K *Geometric and Dosimetric Accuracy of Deformable Image Registration between Average-Intensity Images for 4DCT-Based Adaptive Radiotherapy for Non-Small Cell Lung Cancer* Journal of Applied Clinical Medical Physics 06/2021

**Anderson B.M,** Wahid K., Brock K. *Simple Python Module for Dicom and RT: Conversions to Images and Masks, and Predictions to Dicom-RT Structures* Practical Radiation Oncology 02/2021

Rigaud B, **Anderson B.M**, Yu ZH, Gobeli M, Cazoulat G, Söderberg J, Samuelsson E, Lidberg D, Ward C, Taku N, Cardenas C, Rhee DJ, Venkatesan AM, Peterson CB, Court L, Svensson S, Löfman F, Klopp AH, Brock KK *Automatic segmentation using deep learning for online dose optimization during adaptive radiotherapy of cervical cancer* International Journal of Radiation Oncology, Biology, Physics 10/2020

Kisling K, Cardenas C, **Anderson** **B.M.**, Zhang L, Jhingran A, Simonds H, Balter P, Howell RM, Schmeler K, Beadle BM, Court L. *Automatic Verification of Beam Apertures for Cervical Cancer Radiation Therapy* Practical Radiation Oncology 09/2020

**Anderson B.M**, Lin EY, Cardenas CE, Gress DA, Erwin WD, Odisio BC, Koay EJ, Brock KK*Automated Contouring of Contrast and Non-Contrast CT Liver Images with Fully Convolutional Networks (FCNs)* Advances in Radiation Oncology 05/2020

Cazoulat G, Elganainy D, **Anderson B.M**, Zaid M, Park PC, Koay EJ, Brock KK *Vasculature-Driven Biomechanical Deformable Image Registration of Longitudinal Liver Cholangiocarcinoma Computed Tomographic Scans*. Advances in Radiation Oncology 03/2020

Jin Y, Randall J., Elhalawani H., Feghali K., Elliot A., **Anderson B.M**, Lacerda L., Tran B., Mohamed A., Brock KK, Fuller C., Chung C. “*Detection of Glioblastoma Subclinical Recurrence Using Serial Diffusion Tensor Imaging”* Cancers 02/2020

McCulloch M., **Anderson B.M**, Cazoulat G, Peterson CB, Mohamed ASR, Volpe S, Elhalawani H, Bahig H, Rigaud B, King JB, Ford AC, Fuller CD, Brock KK *Biomechanical modeling of neck flexion for deformable alignment of the salivary glands in head and neck cancer images* Physics in Medicine and Biology 07/2019

Kisling KD, Ger RB, Netherton TJ, Cardenas CE, Owens CA, **Anderson B.M**, Lee J, Rhee DJ, Edward SS, Gay SS, He Y, David SD, Yang J, Nitsch PL, Balter PA, Urbauer DL, Peterson CB, Court LE, Dube S *“A snapshot of medical physics practice patterns,”* J. Appl. Clin. Med. Phys., vol. 19, no. 6, pp. 306–315, (11/2018)

Cardenas, E.C, **Anderson B.M**, Aristophanous M, Yang J, Rhee DJ, McCarroll RE, Mohamed ASR, Kamal M, Elgohari BA, Elhalawani HM, Fuller CD, Rao A, Garden AS, Court LE *Auto-delineation of Oropharyngeal Clinical Target Volumes Using Three-Dimensional Convolutional Neural Networks* Physics in Medicine and Biology 10/2018

**Anderson B.M,** Lin E., Cazoulat G., Gupta S., Odisio B., Brock KK. *Improvement of liver ablation treatment for colorectal liver metastases*. Medical Imaging 2018: Image-Guided Procedures, Robotic Interventions, and Modeling, 2018, p. 74.

McCulloch M.M, **Anderson B.M**, Mohamed A., Volpe S., Elhalawani H., Cazoulat G., Bahig H., Fuller C., Brock KK *Deformable Image Registration for Modeling Neck Flexion in Head and Neck Cancer Patients.* Physics in Medicine and Biology 09/2019

Ger R.B, Cardenas E.C, **Anderson B.M**, Yang J, Mackin DS, Zhang L, Court LE *Guidelines and Experience Using Imaging Biomarker Explorer (IBEX) for Radiomics.* Journal of Visualized Experiments 01/2018

Court, L. E., Kisling, K., McCarroll, R., Zhang, L., Yang, J., Simonds, H., du Toit, M., Trauernicht, C., Burger, H., Parkes, J., Mejia, M., Bojador, M., Balter, P., Branco, D., Steinmann, A., Baltz, G., Gay, S., **Anderson, B.M**, Cardenas, C., Jhingran, A., Shaitelman, S., Bogler, O., Schmeller, K., Followill, D., Howell, R., Nelson, C., Peterson, C., Beadle, B *Radiation Planning Assistant – A streamlined, fully automated radiotherapy treatment planning system*. Journal of Visualized Experiments. 12/2017

Rubinstein, A. E., Ingram, S. W., **Anderson, B.M**, Gay SS, Fave XJ, Ger RB, McCarroll RE, Owens CA, Netherton TJ, Kisling KD, Court LE, Yang J, Li Y, Lee J, Mackin DS, Cardenas CE *Cost-effective immobilization for whole brain radiation therapy*. Journal of Applied Clinical Medical Physics. 04/2017

**Oral Presentations (Presenting Author)**

**Anderson B.M,** Moore K., Padilla L., Bojechko C. *Enabling Adoption of TG-263 Standardization of Nomenclature: A Tool to Reduce the Headache* AAMD Annual Conference 06/2023

**Anderson B.M,** Moore K., Bojechko C. *EPIDEEP: Predicting In-Vivo EPID Transit Images – a Deep Learning Approach*AAPM Annual Conference 07/2022

**Anderson, B.M.**, Rigaud B., Lin YM, Cazoulat G., Koay E., Jones AK., Odisio B, Brock KK *Deep Learning for Near Real-Time Image-Guided Focal Ablation* AAPM Annual Conference. Virtual. 07/2021.

**Anderson, B.M.**, McCulloch M., Kirimli E., Lin YM., Rigaud B., Lin E., TranCao H., Qayyum, Koay E., Odisio B., Brock KK *Closing the Variability Gaps on Liver Surgery: Deep Segmentation of Disease and Lobes* AAPM Annual Conference. (Virtual) Vancouver, Canada. 07/2020.

**Anderson, B.M.**, Cazoulat G., Lin E., Odisio O., Brock KK. *Deep Learning for Rapid Deformable Image Registration of Liver CT Scans* AAPM Annual Conference. San Antonio, TX. 07/2019.

**Anderson B.M**, Lin E., Koay E., Brock KK, Odisio O. *Improving Colorectal Liver Metastasis Treatments with Biomechanical Modeling and Deep Learning* SIR Annual Conference. Austin, TX. 03/2019.

**Anderson B.M**, Lin E., Cardenas C., Koay E., Odisio O., Brock KK. *Automated Contouring of Contrast and Non-Contrast CT Liver Images with Fully Convolutional Neural Networks* ASTRO Annual Conference. San Antonio, TX. 10/2018

Cardenas C, **Anderson, B.M**, Zhang L., Jhingran A., Simonds H., Yang J., Brock Kk., Klopp A., Beadle B., Court L., Kisling K. *A Comparison of Two Deep Learning Architectures to Automatically Define Patient-Specific Beam Apertures.* AAPM Annual Conference. Nashville, TN. 07/2018

**Anderson, B.M,** Cardenas C, Elgohari B., Volpe S., Pei Y., Mohamed A., Elhalawani H., Chung C., Fuller C., Brock KK. *Deep Learning for Head and Neck Segmentation in MR: A Tool for the MR-Guided Radiotherapy.* AAPM Annual Conference. Nashville, TN. 07/2018

**Anderson B.M, Lin E.,** et al. *Deep Learning and Biomechanical Models for Improving Treatment of Colorectal Liver Metastases*. SWAAPM Annual Conference. Houston, TX 04/2018

**Anderson, B.M**, Lin E. Cazoulat G., Gupta S., Koay EJ., Odisio B., Brock KK. *Improvement of liver ablation for Colorectal Liver Metastases* MDA Cancer Imaging and Intervention Conference. Houston, TX 04/2018

**Anderson, B. M.**, Cardenas, C. E, Klopp A., Kry S., Johnson J., Ho J., Rao A., Yang J., Cressman E., Court L. *Computer-Aided Detection of Pathologically Enlarged Lymph Nodes of Non-Contrast CT in Cervical Cancer Patients for Low-Resource Settings* AAPM Annual Conference. Denver, CO. 07/2017.

**Abstracts**

Woodland M, Wood J, **Anderson B.M,** Kundu S., Lin E., Koay E., Odisio O., Chung C., Kang H., Venkateson A., Yedururi S., De B., Lin Y., Patel A., Brock KK.*Comparing Transfer Learning, Data Augmentation, and Data Expansion in the Improvement of Medical Image Generation* AAPM Annual Conference 07/2022

Rigaud, B., Kirimli E., Yedururi S., Cazoulat G., **Anderson B.M.,** Zaid M., Elganainy D., Koay E., Brock KK. *Evaluation of Deep Learning-Based Automatic Segmentation of the Pancreas* AAPM Annual Conference. Virtual, 07/2021

McCulloch, M., Cazoulat G., Rigaud B., **Anderson B.M.,** Kirimli E., Gryshkevych S., Svensson S., Ohrt A., Chopra A., Mathew R., Zaid M., Elganainy D., ,Balter P., Koay E., Brock KK. *Use of Deep Learning Segmentation and Biomechanical Models to Improve Dose Accumulation Accuracy in GI Structures* AAPM Annual Conference. Virtual, 07/2021

Reber, B., **Anderson, B.M.**, Mohamed A., Van Dijk L., Rigaud B., McCulloch M., He Y., Woodland M., Fuller C., Lai S., Brock KK *Predicting Osteoradionecrosis From Head and Neck Radiotherapy Using a Residual convolutional Neural Network* AAPM Annual Conference. Virtual, 07/2021

Brock, K., **Anderson, B.M.**, et al *Anatomical Modeling to Improve the Precision of Image Guided Liver Ablation* Image-Guided Therapy Workshop Rockville, MD. 04/2020

Owens, C., Gupta, A., Shrestha, S., **Anderson, B.M.**, et al *Development of a colon model for colon dosimetry in late effect studies* International Society of Radiation Epidemiology and Dosimetry, Sitges, Spain. 05/2020

Elhalawani, H., Jin Y., Randall J.W., Mahajan A., Mohamed A., Elliot A., **Anderson B.M.,** Landry L., Zhu H., Fuller C., Chung C. *Longitudinal and Dose Dependent Analysis on White Matter Injury in Glioblastoma Radiation Therapy* ASTRO Annual Conference, Chicago, IL. 09/2018

McCulloch M., Elhalawani H., **Anderson B.M**, et. al *Biomechanical model-based Deformable Image Registration for OARs in Glioma Patients* RSNA Annual Conference, Chicago, IL. 11/2018

Lin E.Y., **Anderson B.M**, et al. *Application of a biomechanical deformable registration image method for assessing ablation margins in colorectal liver metastases*. CIRSE Annual Conference. Barcelona, Spain (09/2018)

Kisling K., Ger R., Cardenas C., Rubinstein A., Netherton T., Ingram W., Fave X., Owens C., **Anderson B.M,** Lee J., Gay S., Yang J.,, McCarroll R., Machin D., Li Y., Rhee D., Edward S., He Y., David S., Nitsch P, Balter P., Court L *Broadening the Graduate School Experience: Paper-In-A-Day* AAPM Annual Conference. Nashville, TN. 07/2018

Sen A, **Anderson B.M**, Cazoulat G., Zaid M., Chaudhury B., Elganainy D., Koay E., Brock KK. *A Comparison of Deformable Registration Techniques for Pre and Post-Treatment Cholangiocarcinoma CT Images.* AAPM Annual Conference. Nashville, TN. 07/2018

Cazoulat G, Chaudhury B, **Anderson B.M**, Zaid M., Elganainy D., Koay E., Brock KK *Use of Vasculature Information in Biomechanical Model-Based Registration of Longitudinal Liver Cancer CT Scans.* AAPM Annual Conference. Nashville, TN. 07/2018

D. Research Support/Scholastic Performance

I am receiving funding for my research from the University of North Carolina, Chapel Hill, with 40% dedicated research time.

| Year | Class | Grade |
| --- | --- | --- |
|  | | |
|  |  |  |
| 2017 | Intro to Deep Learning (Rice) | A |
| UT MD Anderson Cancer Center | | |
| 2017 | Fundamental Biological Principals of Molecular Imaging | A |
| 2017 | Therapy Physics Rotation | P |
| 2016 | Imaging Physics Rotation | P |
| 2016 | Radiation Biology | B |
| 2016 | Intro to Radiation Protection | B |
| 2016 | Physics in Nuclear Medicine | A |
| 2016 | Intro to Medical Physics III (Therapy) | A |
| 2016 | Intro to Medical Physics II (Imaging) | A |
| 2016 | Radiation Detection | B |
| 2015 | Electronics for Medical Physics | A |
| 2015 | Applied Math in Medical Physics | A |
| 2015 | Anatomy and Oncology for Medical Physics | B |
| 2015 | Intro to Medical Physics I | A |
| Georgia Institute of Technology | | |
| 2015 | NRE Design | A |
| 2015 | Radiation Physics Lab | B |
| 2014 | Stellar Astrophysics | A |
| 2014 | Engineering Ethics | B |
| 2014 | Special Problems | A |
| 2014 | Radiation Sources and Applications | A |
| 2014 | Nuclear Reactor Physics II | B |
| 2014 | Radiation Protection Engineering | A |
| 2014 | Nuclear Reactor Physics I | B |
| 2014 | Diagnostic Imaging Physics | B |
| 2014 | Science Foundation of Health | A |
| 2013 | Special Topics | B |
| 2013 | Plasma Physics and Fusion Engineering | B |
| 2013 | Reactor Engineering | B |
| 2013 | Radiation Detection | A |
| 2013 | Engineering Economics | A |
| 2013 | Intro to Modern Physics | B |
| 2013 | Radiation Physics | A |
| 2013 | Heat Transfer | A |
| 2013 | Instrumentation and Electronics Lab | B |
| 2013 | Electromagnetics | B |
| 2012 | Intermediate Spanish I | B |
| 2012 | Principle and Applications Engineering Materials | A |
| 2012 | Fluid Mechanics | C |
| 2012 | Circuits and Electronics | A |
| 2012 | Deformable Bodies | A |
| 2012 | Thermodynamics | A |
| 2012 | Statistics and Applications | A |
| 2012 | Elementary French I | A |
| 2012 | The Global Economy | A |
| 2011 | Social Psychology | A |
| 2011 | Intro to Physics II | A |
| 2011 | Differential Equations | A |
| 2011 | Principles of Microeconomics | B |
| 2011 | Statics | B |
| 2011 | General Psychology | A |
| 2011 | Intro to Physics I | A |
| 2011 | Intro to NRE | B |
| 2011 | Calculus III | B |
| 2011 | Computing for Engineers | A |
| 2010 | Linear Algebra for Calculus | B |
| 2010 | The United States to 1877 | A |
| 2010 | Freshman Seminar | A |
| 2010 | English Composition II | B |
| 2010 | General Chemistry | A |