COURSE INFORMATION

Course Description:
Prepares physician assistant students to function in all aspects of surgical medicine. Students are introduced to surgical disorders commonly encountered in various settings by the physician assistant. Students gain familiarity with preoperative and postoperative patient care, assisting in the operating room, performing exams and surgical procedures. Students develop medical, technical and interpersonal skills to provide care surgical patients and communicate with patients, family members and other members of the health care team. Requires direct supervision by clinical instructors. The rotation is 4 weeks long, schedule is dependent on that of the preceptor.

Credits: 4

Prerequisites: Enrollment in the Physician Assistant Master’s Program
Day and Time:
Location:

INSTRUCTOR INFORMATION

Instructor: Jake Oestrech M.D. Director of Clinical Education
Office: S1106
Phone: 218-723-5912
Fax: 218-733-2291
Email: joestreich@css.edu
Office Hours:
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Use of texts from all previous class work is recommended for reference. All available on Access Medicine: http://accessmedicine.mhmedical.com/ and R2 Digital Library: http://www.r2library.com.akin.css.edu/

REQUIRED RESOURCES:


COURSE OUTCOMES AND OBJECTIVES

Numbers indicate Course Outcomes while bulleted points indicate Instructional Objectives. The Course Objectives are designed to develop PA competencies. These are:

1) Medical Knowledge (MK)
2) Interpersonal and Communication Skills (IPC)
3) Patient Care (PC)
4) Professionalism (P)
5) Practice-based Learning and Improvement (PBL)
6) Systems Based Practice (SBP)

Surgical Medicine specific instructional objectives:

At the end of this rotation, the PA student will:

1) Medical History
   - Through direct preceptor observation and/or oral or written presentations, demonstrate logical and organized history taking, appropriate for pre- or post-surgical visits, including chief complaint, history of present illness, past medical and surgical history, family history and review of symptoms. (MK, IPC, PC, P)
   - Demonstrate cultural competency by using appropriate language with each patient to demonstrate sensitivity and respect, taking into account patient age, gender, culture, and ethnic background. (MK, IPC, PC, P)

2) Physical Examination
• Perform and document an appropriate physical examination for pre-operative screening and post-operative follow-up. (MK, IPC, PC, P)
• Ensure proper pre-operative preparation of the patient. (MK, IPC, PC)
• Conduct a physical examination appropriate to the nature of the visit or complaint. (complete vs. focused) (MK, IPC, PC)
• Demonstrate a sensitive and respectful approach to performance of physical exam for patients across the lifespan taking into account patient age, gender, culture, and ethnic background. (MK, IPC, PC, P)

3) Laboratory and Diagnostic Studies/Procedures
• Identify, perform, order and/or interpret appropriate, cost-effective, routine, diagnostic procedures, based on history and physical examination findings, and be able to assist the physician with other diagnostic procedures as directed. (MK, IPC, PC, P)
• Identify and describe the indications, contraindications, risks, costs, and patient inconvenience of diagnostic tests. (MK, IPC, PC)
• Propose a diagnostic plan based on analysis of the differential diagnosis and justify the diagnostic tests and procedures proposed taking into account the test’s sensitivity, specificity, and predictive value, as well as its invasiveness, risks, benefits, limitations, and costs. (MK, PC, PBL, SBP)
• Perform or assist in the performance, interpretation and explanation of labs and diagnostic procedures outlined in the Skills Section of the syllabus. (MK, PC, IPC, P)

4) Diagnosis
• Based on a history and physical examination, demonstrate an ability to formulate differential diagnoses, and propose plans for the initial evaluation and management of patients in each of the topics listed in the Disease and Disorders section of the syllabus. (MK, IPC, PC)
  o Attention should be given to the etiology, epidemiology, prognosis, physiology/pathophysiology, symptoms, signs, laboratory testing, diagnostic testing, interpretation of findings, medical management, non-pharmacologic treatment (including surgical intervention), complications, patient education and counseling.
• Select the most likely diagnosis based on presented data and effectively communicate information about the diagnosis to the patient. (MK, IPC, PC, P)

5) Health Maintenance and Disease Prevention
• Identify and manage problems common to peri-operative management of the surgical patient such as DVT/PE prophylaxis, infection, mobility and ambulation, blood conservation and pain management. (MK, IPC, PC, P)
• Assess the physical findings on the pre-operative exam and provide appropriate guidelines for risk factor education and reduction, health promotion, disease prevention as well as identifying high risk conditions. (MK, IPC, PC, P)

6) Clinical Intervention
• Describe the composition of fluids that are frequently lost from the body (urine, gastric secretions, diarrhea, third spaced fluids, and hemorrhage) and formulate plan to compensate for the loss of these fluids through the proper utilization of IV fluid and blood products. (MK, PC)
● Interpret serum electrolytes to determine the replacement fluid. (MK, PC)
● Recognize the signs and clinical manifestations of hypovolemia and hypervolemia and institute corrective measures. (MK, PC)
● Document a problem-focused history, physical examination, assessment and plan in the medical record. (SOAP note) (IPC, P, SBP)

7) Clinical Therapeutics
● Compare and contrast the appropriate use of medications (analgesics, antibiotics, anti-emetics) in the surgical patient related to such issues as dosage, indications, contraindications, interactions, complications, metabolism and excretion. (MK, PC)
● Discuss anesthetics (indications, modes of action, contraindications, complications and combinations) in: (MK, PC)
   o General anesthesia
   o Spinal and regional anesthesia
   o Regional anesthesia/field blocks

8) Professional and Health Care Systems
● Present to the preceptor a brief synopsis of the patient’s illness, pertinent positive and negative findings and the diagnostic and therapeutic regimen instituted. (MK, IPC, PC, P)
● Communicate effectively with the patient and family regarding the disease process, risks, expected outcome, possible side effects, and post-operative care. (MK, IPC, PC, P)
● Document the care of the surgical patient. (IPC, P, SBP)
   o Write clear, concise and relevant progress notes delineating diagnostic, therapeutic and patient education plans
   o Document the discharge summary
   o Maintain a complete, up-to-date problem list
● Develop the ability to work within a team based approach to patient care demonstrating an appreciation of the role of others in the care of the patient as well as appropriate interpersonal skills using clear communication, being open and receptive to feedback from other members of the team, and by treating all members of the team with respect and courtesy. (IPC, PC, P, SBP)
● Work with medical team and patient to formulate a complete discharge plan anticipating and arranging for discharge medication prescriptions, outpatient or home therapy services, home/self-care instructions and scheduling follow-up. (MK, IPC, PC, P, SBP)
● Anticipate specific needs of the patient being sensitive to the patient’s home environment, change in level of care needed based on post-surgical condition and ability to perform activities of daily living. (MK, IPC, PC, P, SBP)
● Coordinate communication with the patient’s primary care and/or referring physician to allow for smooth transition of care. (IPC, PC, P, SBP)

9) Application of Science Concepts
● Based on a history and physical examination, formulate differential diagnoses and propose plans for the initial evaluation and management of patients in each of the topics listed in the Disease and Disorders section of the syllabus. Attention should be given to the etiology, epidemiology, prognosis, physiology/pathophysiology, identification of disease processes and complications of diseases. (MK, PC)
● Effectively use available references to access evidence-based medicine information to improve personal knowledge base and clinical practices. (MK, PC, PBL, SBP)
Physician Assistant General Objectives for Clinical Rotations
In addition to rotation-specific objectives these general objectives apply to every core and elective rotation and are formulated in accordance with NCCPA and PAEA knowledge and skills blueprints:

At the end of the rotation the PA student will:

Medical History
- Take and record comprehensive and focused histories on patients
- Associate patient's complaints with their presented history
- Interpret pertinent history and formulate a differential diagnosis
- Recognize and identify individual risk factors for each disease and related condition
- Recognize and identify signs and symptoms associated with a specific diagnosis

Physical Examination
- Recognize and demonstrate what constitutes an appropriate directed physical exam after eliciting a patient history
- Recognize pertinent physical findings
- Interpret particular physical findings in order to formulate different diagnoses

Laboratory and Diagnostic Studies
- Select appropriate routine or initial laboratory or diagnostic studies for given patient including evaluation of cost effectiveness of studies
- Effectively communicate indications for laboratory and diagnostic studies and risks associated with studies
- Demonstrate appropriate technique in using diagnostic equipment and collecting specimens
- Interpret and apply results of diagnostic studies
- Select and initiate appropriate follow-up studies if and when indicated

Diagnosis
- Evaluate the differential diagnosis in light of history, physical exam, and laboratory and diagnostic study findings
- Select the most likely diagnosis based on presented data
- Recognize associated disease conditions and complications

Health Maintenance and Disease Prevention
- Recognize and address risk factors for conditions amenable to prevention or detection in an asymptomatic individual
- Compare relative value of common screening tests
- Determine appropriate counseling related to preventable conditions or lifestyle modifications
- Demonstrate knowledge of immunization schedules for patients across the lifespan (infant, children and adults) and foreign travelers and effectively communicate risks and
benefits of immunization

- Identify human growth and development milestones
- Recognize effects of environmental and occupational exposure on health
- Recognize the impact of stress and psychological manifestations of illness and injury on health
- Recognize signs of abuse and neglect and indications for referral
- Identify barriers to care
- Demonstrate effective use of informational databases to inform clinical guidelines/decisions

Clinical Intervention

- Effectively communicate indications, contraindications, complications, risks, benefits and techniques for selected procedures
- Demonstrate technical proficiency in performing specific procedures
- Select appropriate management and monitoring for patients after intervention including compliance, adverse events, and effectiveness
- Evaluate severity of patient condition in terms of need for medical and/or surgical referral, hospital admission or other appropriate setting
- Recognize and initiate treatment for life-threatening emergencies, including seeking appropriate supervision if needed
- Prioritize each patient's conditions and make appropriate referrals for further diagnostic assessment
- Recognize and identify factors in the history that affect the patient’s treatment plan or prognosis
- Identify and evaluate patients for non-pharmacological treatment (physical therapy, counselling, surgery)
- Identify appropriate need for referral for patients to other services and determine appropriate follow up from referral
- Identify indications for hospital admission
- Identify components of appropriate discharge planning
- Identify components of a rehabilitation program
- Demonstrate appropriate counseling of a patient or family regarding current medical interventions and future treatment plan
- Describe roles of other health care team professionals

Clinical Therapeutics

- Recognize and identify indications for use, contraindications, side effects, adverse reactions, and drug interactions of medications
- Initiate appropriate follow-up schedule or monitoring approach regarding a therapeutic regimen (compliance, side effects, adverse reactions, effectiveness)
- Effectively communicate the importance of patient compliance with a treatment regimen and techniques to increase compliance and understanding
- Select treatment regimen considers cost, efficacy, possible adverse reactions, contraindications and drug interactions for medications selected
- Identify the risks, signs and symptoms of drug interactions resulting from polypharmacy in the therapeutic regimen
- Recognize presentation of allergic reaction and drug toxicity
● Modify the therapeutic regimen within the context of continuing care

Professional and Health Care Systems
● Integrates information technology to provide quality patient care
● Documents in a timely and accurate fashion
● Commits to fairness and accuracy in billing
● Maintains a code of ethics and adherence to legal and regulatory requirements
● Demonstrate respect, compassion, and integrity in relationships with other professionals, patients and their families

Application of Science Concepts
● Recognize and identify normal and abnormal anatomy and physiology
● Recognize and identify associations of disease conditions and complications through application of scientific concepts
● Correlate abnormal physical exam or diagnostic study findings to a given disease process

COURSE CONTENT
Integration and application of all aspects of patient management, including but not limited to; evaluation, assessment, treatment, communication, interprofessional and professional skills.

DISEASES AND DISORDERS
The following Common Problems of Surgery must be addressed during the rotation either by exposure during the rotation or through review of didactic materials.

Upon completion of the rotation, the student will demonstrate the ability to evaluate, manage, and educate patients and their families on the following acute, chronic, routine and preventative conditions encountered in the inpatient and outpatient surgical setting:

***Note, this is NOT an exhaustive list. You will be responsible for this list as well as that found at the link referenced below.***

- Acute appendicitis
- Abdominal pain
- Hernia
- Bowel obstruction
- Gallbladder disease
- Gastrointestinal disease
- Breast disease
- Anemia: acute and chronic
- Trauma
- Tumors: benign and malignant (breast, thyroid, lung, gi, renal, gu, neuro)
- Cerebrovascular/pulmonary disease (aaa, pvd, pe, ptx, cad)
- Abdominal aortic aneurysm
- Burn and wound care
Surgical nutrition and fluid management
Lifesaving techniques

The student should be able to recognize and manage the following postoperative complications:
- Infection problems
- Fever of unknown origin (FUO)
- Phlebitis/DVT/PE
- Cardiopulmonary problems
- Gastrointestinal problems
- Postoperative bleeding
- Urinary retention
- Renal failure
- Drug and transfusion reactions

SKILLS

This list of skills is intended to serve as a guide for both the student and Preceptor during the clinical rotation. Students are expected to acquire certain technical and interpretation skills that are commonly employed in medical care. Students are required to participate in and perform certain basic procedures under supervision by their preceptor. The following is a list of tests or procedures to focus on for this rotation. At the end of the rotation the student should have at least two of the italicized procedures below logged in E*Value portfolio, verified by the preceptor. If the student does not log two verified procedures, this may be remediated on call back day.

Lab/Diagnostics
- Perform and/or interpret the following:
  - ECG
  - Urinalysis
  - Venipuncture for CBC, Electrolytes, blood serum chemistries and cultures
  - IV insertion and fluid management

Order and evaluate reported findings:
- Routine x-ray: c-spine, chest, KUB, back, abdomen and pelvis, extremity; CT, MRI
- Pulmonary function tests

Order, perform and/or assist, and/or explain to patients the following procedures and tests:
- Assist in major and/or minor procedures
- Apply ACLS techniques in life-threatening situations
- Preoperative and postoperative patient management
- Sterile technique
- Surgical scrubbing
- Wound closure techniques: suturing/stapling
- Anesthesia (local/digital)
- Surgical suture selection and knot tying
- Incision and drainage
- Wound care
The Content Topic List prepared by the Physician Assistant Education Association pertinent to Surgical Medicine available at
This outlines the conditions students need to understand in order to prepare for end of rotation examinations.

***Note***: The CSS PA Program’s clinical rotations provide comparable experiences over the course of the program. Each clinical site has different resources, culture, philosophy, and patient populations; these factors coupled with the service setting (whether inpatient or outpatient) all impact patient access to care, patient volume, and the types of patients seen on a weekly basis. As a result, the program assesses student exposure to the various domains of medical education for each clinical rotation and over the course of the clinical year through student data management in our clinical tracking database (E*Value Portfolio), and extensive monitoring by faculty of student outcomes performance including patient case mix, interventions and procedures, case presentations, formative reviews, and formal summative assessment.

It is understood that the unique circumstances of a rotation may preclude students from directly observing all diseases and disorders during their 4 week rotation. However, students are still responsible for all material.

**COURSE OUTLINE**

Students will be engaged in direct patient care under the supervision of the Clinical Preceptor, a licensed physician, physician assistant, or nurse practitioner. The Clinical Director will monitor progress during the course.

Students will work the same hours as the Clinical Preceptor.

Please see Student Handbook for all clinical rotation requirements/policies/procedures.

**COURSE ASSESSMENTS**

The process of student assessment and evaluation of competency is ongoing throughout the rotation, and includes a mid-rotation preceptor evaluation with preceptor evaluation of clinical competency, case presentations, electronic patient/case logging in the E*Value student
experience portfolio, the final preceptor evaluation with preceptor evaluation of clinical competency, and the end-of-rotation exam.

**Evaluation Criteria:**

*Note: Starred (*) items will be assigned prior to the rotation.*

Mid-rotation evaluation from Preceptor
Final evaluation from Preceptor
End of Rotation Exam

**Written H&P with recorded oral presentation**

(5% outcomes 1, 2, 3, 4, 7, 9)

(due at mid-rotation for all students)

The student will be assigned one of the following two options:

1. *Written H&P* (due at Grand Rounds for students not giving oral presentation that day)
2. *Oral Case Presentation with handout regarding presentation topic* (presented at Grand Rounds)

**Electronic Entries**

(Includes all reports, logging of patient encounters in e-value, student evaluations of sites and preceptors)

**Total**

73-100% = PASS
Below 73% = NO PASS

Please see the policy regarding Academic Probation in found in the Physician Assistant Student Handbook. [Link here]

The criterion for a failing grade for a rotation is any one of the following:

1. Failure to submit written assignments which meet program standards
2. Absence of more than 2 days will require the rotation to be repeated unless arranged or approved by the Director of Clinical Education
3. Failure to complete all required electronic entries within 7 days of end of rotation
4. An average grade of the final preceptor evaluation below 3.0 (Interpreter level- ORIME):
**Curriculum Standards**

B3.02 Supervised clinical practice experiences must enable students to meet program expectations and acquire the competencies needed for clinical PA practice.

B3.03 Supervised clinical practice experiences must provide sufficient patient exposure to allow each student to meet program-defined requirements with patients seeking: a) medical care across the life span to include, infants, children, adolescents, adults, and the elderly, c) care for conditions requiring surgical management, including pre-operative, intra-operative, post-operative care

B3.04 Supervised clinical practice experiences must occur in the following settings: c) inpatient and d) operating room.

B3.07 Supervised clinical practice experiences should occur with preceptors practicing in the following disciplines: c) general surgery

**COURSE POLICIES**

Students are expected to follow all requirements in student handbook. *Link here*

**Equal Access Statement:**

Students with disabilities, students who sustained injury in active military service, and students with chronic medical conditions are entitled to appropriate and reasonable auxiliary aids and accommodations through The Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. It is the student's responsibility to notify the Center for Equal Access as soon as possible to ensure that such accommodations are implemented in a timely fashion. For more information or to request academic accommodations, please contact the Center for Equal Access in Tower Hall 2126; by phone at (218) 723-6747, 218-625-4891; or via e-mail at access@css.edu

**Academic Honesty Policy:**

Academic honesty and integrity are highly valued in our campus community. Academic honesty directly concerns ethical behaviors which affect both the academic environment and the civic community. Academic dishonesty seriously violates the integrity of the academic enterprise and will not be tolerated at St. Scholastica. *The full text of the CSS Academic Honesty Policy is found in the Student Handbook or online at [http://www.css.edu/Academics/Office-of-Academic-Affairs/Academic-Honesty-Policy.html](http://www.css.edu/Academics/Office-of-Academic-Affairs/Academic-Honesty-Policy.html)*

**Sample Notes**

**Pre-Op Note:**
Date
Time
Pre-Op Diagnosis:
Planned Procedure and Scheduled Time:
Indication:
Labs/studies:
CBC BMP U/A LFT's
Official CXR reading: (on chart)
Official EKG reading: (on chart)
Type and Cross/Screen for __ units in blood bank
NPO after MN
IVF ordered after MN
Antibiotics ordered on call to OR:
Anesthesia evaluation (on chart)
Operative Consent (on chart)
  • If any of the above are missing or incomplete, call attending

Operative Note:

Date
Time
Pre-Op Diagnosis:
Post-Op Diagnosis:
Procedure:
Surgeon:
Assistants:
Anesthesia:
EBL:
UOP (urine output):
IVF:
Findings:
Specimens:
Drains:
Complications:
Disposition:

Surgery Progress Note:

Date
Time
Meds
POD#__ after ______________________________ Abx day #___
24hr events/subjective complaints
(Include presence or absence of nausea, vomiting, flatus, BM, ambulation, pain, chest pain, SOB, and other PERTINENT info.)
Vitals: Tmax, Tcurrent BP(range) HR(range) RR(range) Pox (if available)
I/O: Total In/Total Out
8hr shifts - Ins broken down into IVF, PO, NGT, feeding tube, etc.
8hr shifts - Outs broken down into NGT, U/O, stool, emesis, drains, etc.

**PE:** Lungs – CTA bil
Heart – RRR, no M/R/G
Abdomen – soft, ND/NT, normoactive BS
Wound – well-approximated, no erythema or d/c
Stoma – pink, patent, productive of stool
Ext – no edema
Labs (do not present orally if previously presented on rounds)

**A/P:** __ year old man/woman POD#___ after ______________________ progressing well

**Neuro:** Pain control adequate, continue PCA
OOB, ambulate today

**CV:** Mild tachycardia, will bolus with 500cc isotonic crystalloid and reevaluate
Resp: No issues, continue spirometry

**GI:** Await return of bowel function, continue NPO, NGT

**GU:** U/O marginal, continue to monitor closely after volume load
Replete electrolytes

**Heme:** HCT 27 and stable, continue SQ Heparin

**ID:** Perioperative abx D/C'd, afebrile, check WBC today

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**ORIME Evaluation Tool**

The benchmarks for clinical year acquisition of skills and knowledge are defined through the ORIME (Observer-Reporter-Interpreter-Manager-Educator) competency-based evaluation tool. This is utilized throughout the clinical courses.

**Below is an overview of the ORIME tool as it applies to the evaluation of students:**

<table>
<thead>
<tr>
<th>Professional Role</th>
<th>Level of Student</th>
<th>Description of Role</th>
</tr>
</thead>
</table>
| O - “Observer”    | ● All 1st Year PA-S  
                   ● 2nd Year PA-S in surgical or specialty practice | ● The learner is not participating in direct patient care, they are observing the preceptor in most aspects of healthcare delivery. |
| R - “Reporter”    | ● Some 1st Year PA-S by end of first year | ● The learner can accurately gather and clearly communicate facts to the preceptor. |
| I - “Interpreter” | All 2nd Year PA-S for common problems. | • The learner begins to prioritize identified problems.  
• Progresses in development of differential diagnosis  
• Uses clinical findings and diagnostic studies to help support a diagnosis.  
• Answers the “why” questions as they relate to patient care. |
|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------|
| M - “Manager”     | All 2nd Year PA-S, late in 2nd year. | • The learner should be able to provide at least 3 reasonable options in the diagnostic and therapeutic plans.  
• Answers the “how” questions for getting things done. |
| E - “Educator”    | Highly advanced 2nd Year PA-S at the end of their training. | • The learner will define important questions to study and differentiate current evidence.  
• Shares leadership within a team.  
• Learns from one’s own experience to become an educator. |

**Procedural Competency Evaluation Form**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
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</thead>
</table>
| Identifies pertinent anatomy and physiology for a specific procedure.  
Uses appropriate Universal Precautions | Performs patient assessment, obtains informed consent and ensures monitoring equipment is in place in accordance with patient safety standards  
Knows indications, contraindications, anatomic | Determines a backup strategy if initial attempts to perform a procedure are unsuccessful  
Correctly interprets the results of a diagnostic procedure | Performs indicated procedures on any patients with challenging features (e.g. poorly identifiable landmarks, at extremes of age or with co-morbid conditions) | Teaches procedural competency and corrects mistakes |
<table>
<thead>
<tr>
<th>landmarks, equipment, anesthetic and procedural technique, and potential complications for procedure</th>
<th>Performs the indicated common procedure on a patient with moderate urgency who has identifiable landmarks and a low-moderate risk for complications</th>
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</thead>
<tbody>
<tr>
<td>Performs post-procedural assessment and identifies any potential complications</td>
<td>Performs the indicated procedure, takes steps to avoid potential complications, and recognizes the outcome and/or complications resulting from the procedure</td>
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<tr>
<td>Lack of Professionalism</td>
<td>Professionalism Uncertainly</td>
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<td>Personal hygiene</td>
<td>Personal hygiene</td>
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<td>Punctuality</td>
<td>Punctuality</td>
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<td>Attention to detail</td>
<td>Attention to detail</td>
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<td>Initiative</td>
<td>Initiative</td>
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<td>Cooperation</td>
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<td>Leadership</td>
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<td>Communication</td>
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<td>Work Ethic</td>
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<td>Quality of Work</td>
<td>Quality of Work</td>
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<tr>
<td>Dependence</td>
<td>Dependence</td>
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<tr>
<td>Overall Performance</td>
<td>Overall Performance</td>
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</tbody>
</table>