



# Novice Teen Driver Education Curriculum Standards



**Classroom and In-Car  
Standards for  
Segment I and  
Segment II**

**2023**

# Table of Contents

## Segment I

<b>Classroom and In-Car Standards .....</b>	<b>4</b>
Introduction .....	5
Classroom Performances .....	7
Goals.....	7
Overview of Classroom Standards for Novice Driver Education.....	8
Overview of In-car Standards for Novice Driver Education .....	11
Relationship between Classroom and In-Car Standards.....	13
Essential Knowledge and Skills for Driver and Traffic Safety Education .....	14
Driver and Traffic Safety Education: Classroom .....	14
C 1.0 Classroom Standard One: Preparing to Operate a Vehicle .....	14
C 2.0 Classroom Standard Two: Understanding Vision and Vehicle Controls.....	17
C 3.0 Classroom Standard Three: Introducing Traffic Entry Skills .....	21
C 4.0 Classroom Standard Four: Introducing Intersection Skills and Negotiating Curves and Hills.....	23
C 5.0 Classroom Standard Five: Space Management and Vehicle Control Skills in Moderate Risk Environments.....	25
C 6.0 Classroom Standard Six: Developing Traffic Flow and Space Management Skills at Speeds Below 55 m.p.h. ....	27
C 7.0 Classroom Standard Seven: Dealing with Complex Environments at Highway Speeds.....	29
C 8.0 Classroom Standard Eight: Factors Affecting Driver Performance.....	31
C 9.0 Classroom Standard Nine: Managing Adverse Conditions .....	32
C 10.0 Classroom Standard Ten: Other Roadway Users.....	34
C 11.0 Classroom Standard Eleven: Responding to Emergencies, Vehicle Malfunctions and Crashes .....	36
C 12.0 Classroom Standard Twelve: Understanding Advanced Driver-Assistance Systems (ADAS) Safety Features .....	37
C 13.0 Classroom Standard Thirteen: Making Informed Consumer Choices .....	39
Driver and Traffic Safety Education: In-car Skills.....	41
IC 1.0 In-car Standard One: Preparing to Operate a Vehicle .....	41
IC 2.0 In-car Standard Two: Introducing Traffic Entry and Intersection Approach Skills .....	44
IC 3.0 In-car Standard Three: Developing Visual and Mental Perception for Vehicle Control Tasks .....	46
IC 4.0 In-car Standard Four: Responding to Emergency Situations .....	49
IC 5.0 In-car Standard Five: Assessment of Driver Performance .....	50

## Segment II

<b>Classroom and In-Car Standards .....</b>	<b>52</b>
Classroom Performances Concurrent with Segment I.....	53
Overview of Novice Driver Preparation Segment II Classroom Standards .....	54
Overview of Novice Driver Preparation Segment II In-car Standards .....	55
Essential Knowledge and Skills for Driver and Traffic Safety Education .....	57
Driver and Traffic Safety Education: Classroom and In-Car Segment II.....	57
Segment II - C 1.0 Classroom Standard One: Mental and Perceptual.....	57
Segment II - C 2.0 Classroom Standard Two: Driver Fitness Tasks.....	58
Segment II - C 3.0 Classroom Standard Three: Avoiding Collision Threats .....	59
Segment II In-car training. ....	60
Segment II - IC 1.0 In-Car Standard One: Commentary Driving Assessment.....	60
Segment II - IC 2.0 In-Car Standard Two: SEE System Training .....	60
Segment II - IC 3.0 In-Car Standard Three: Commentary Space Management Assessment .....	60
Segment II - IC 4.0 In-Car Standard Four: Advanced Collision Avoidance Actions (Off-Road Application).....	61

# Segment I

## Classroom and In-Car

## **American Driver and Traffic Safety Education Association National Curriculum Standards**

### **Introduction**

Motor vehicle crashes are one of the leading causes of death for teenagers. Over one-half of these fatalities occur when the teenager is driving. Inexperience and immaturity are the leading factors that contribute to the over-representation of teenagers in traffic crashes. Driving is a complex task and takes time to learn. There is no simple solution: in many cases, crashes are not caused by lack of knowledge of basic traffic laws, or the lack of basic vehicle handling skills; instead, the issue is more complex. The problem appears to be largely a function of the developmental characteristics of youth: taking unnecessary risks, lack of respect for mortality, and the influence of peer pressure and environment. Novice drivers have limited experience, questionable driver attitudes, distorted risk acceptance, and a lack of judgment in critical situations. Ultimately, the consequence is the increased probability of unsafe driving behaviors that can result in a traffic crash with injuries or death to the driver and/or the passenger(s) in the motor vehicle and others around them.

These driver education content standards have been developed with the primary goal of providing a foundation for driver education programs and represent the goals by defining what should be learned. The standards are not curriculum. Curriculum involves lesson plans, textbooks, assignments, classroom activities and assessments; curriculum must be aligned to the standards to ensure student access to content which can help to reduce the crash involvement of novice teen drivers.

The standards will not provide classroom materials but shall guide the state's development of the curriculum or the "how" of teaching. The standards identify the critical content knowledge and skills that shall be taught in driver education courses to improve overall quality. Further, the standards ensure alignment of instruction to formative and summative evaluation. Therefore, these content standards - the "what" of driver education - outline expectations for curriculum development.

In 1993, the National Highway Traffic Safety Administration (NHTSA) convened a panel of national experts in traffic safety to identify research for training programs designed to reduce young driver risk taking and to heighten the decision-making skills. In 1994, Congress requested that NHTSA review novice driver education and recommend procedures for improving the training of drivers. The report documented NHTSA efforts; discussed why novice driver education may not be as effective as it had promised; documented the arguments for an improved program within the graduated licensing system; and identified four areas for restructuring novice driver education as an integral part of the licensing system.

In 1999, to determine the needs of a comprehensive instructional program, a document review resulted in a lifetime learning program outline. Three specific training periods were identified: pre-licensing, graduated licensing, and continuing licensing. Pre-licensing includes traffic safety education in the school, home, and public information areas. This phase also includes driver education and training efforts in the public and private sectors designed to prepare a driver for licensing. Graduated licensing includes parent training and driver education and training efforts by the public and private sectors that move beyond the pre-licensing efforts. Continuing licensing includes required, personal, and specialized training imposed by the court system, business, government, and the insurance industry to qualify for continued or additional licensing requirements or discounts.

In 2009, with assistance from NHTSA, the Novice Teen Driver Education and Training Administrative Standards (NTDETAS) were developed by representatives from the driver education professional community to define the future of driver education and to assist in improving the delivery of driver education programs nationally.

In 2017, a revision of the NTDETAS added standards for classroom, behind-the-wheel, and online deliveries as well as teacher training standards and materials. The 2017 revision included additional standards for advanced driver-assistance system (ADAS) safety features.

In 2022, the ADTSEA curriculum standards were revised through a working group to include updates to vehicle technologies, micro-mobility, drugged driving, sharing the road with motorcyclists, pedestrians, and bicyclists and students with disabilities.

A new section on advanced driver-assistance system (ADAS) safety features was added to outline what to instruct to students about the use of safety features, the safety benefits, concerns, abilities and limitations, and how to use ADAS for the safety of the vehicle occupants and other road users of the transportation system. The American Driver and Traffic

Safety Education Association (ADTSEA) 2022 curriculum standards are referenced in the NTDETAS 2022 Edition as *Attachment A*.

Since the role of the driver educator is not limited to pre-licensing efforts in the public and private sector, it will need to be expanded to provide services for lifetime learning components. ADTSEA will continue to play a role in identifying the specific needs to accomplish the task of preparing a novice driver. The ADTSEA Curriculum Standards Working Group will regularly review the curriculum standards when needed as new issues are identified and new safety features become available.

## Classroom Performances

### Goals

A novice driver is a person who is able to:

- Demonstrate a working knowledge of rules, regulations and procedures of operating an automobile;
- Use visual search skills to obtain correct information and make managed-risk decisions for effective speed and position adjustments;
- Interact with other users within the Highway Transportation System by adjusting speed, space, and communications to avoid conflicts and reduce risk;
- Demonstrate balanced vehicle movement through steering, braking, and accelerating in a precise and timely manner throughout a variety of adverse conditions;
- Recognize vehicle safety features and explain the benefits of vehicle warning and assistance systems.
- Confirm the need to protect oneself and others through using active and passive vehicle occupant protection systems;
- Display knowledge of responsible actions in regard to physical and psychological conditions affecting driver performance; and
- Extend supervised practice with licensed parent or guardian to develop precision in the use of skills, processes, habits and responsibilities.

Skill evaluation for each driver will indicate progression for:

- Positioning a vehicle:
  - ✓ Based on visual referencing skills, dividing attention, space management,
- Procedures and sequencing for vehicle operational skill:
  - ✓ Based on pre-drive checks, driver readiness procedures, vehicle control skills, vehicle maneuvering, vehicle position and/or speed selection, and vehicle balance.
- Processing traffic and vehicle information into appropriate speed and position selection:
  - ✓ Based on visual search skills, dividing attention, and space management as measured by vehicle speed, roadway position, driver commentary, and appropriate communication.
- Precision movements for maintaining vehicle control and balance in expected and unexpected situations:
  - ✓ Based on vehicle speed control, dividing attention, vehicle balance, collision avoidance, response to mechanical failures, and traction loss prevention, detection, and control.
- Extending supervised practice with licensed parent or guardian:
  - ✓ Based on delivery of parent guide and completion of Program Skills Log.

## Overview of Classroom Standards for Novice Driver Education

The student will participate in the state approved driver education 45-hour classroom program comprised of 22.5 sessions of 120-minute training segments.

### **C 1.0 Classroom Standard One: Preparing to Operate a Vehicle**

The student will:

- 1.1 become aware of program goals through a student/parent orientation.
- 1.2 recognize and comply with the rules of the road based national, state and local requirements.
- 1.3 recognize and illustrate vehicle operating space needed for managed-risk operation.
- 1.4 understand and practice processes and procedures for preparing to drive a vehicle. This includes being aware of and knowing how to utilize current vehicle safety features.
- 1.5 describe the value of occupant protection as a crash prevention and loss prevention tool for managed-risk driver performance
- 1.6 identify and practice a procedure for starting a vehicle (push starting the ignition or starting the engine).
- 1.7 identify and practice a procedure for securing a vehicle.
- 1.8 attend the student/parent debriefing at the conclusion of the course and complete the requirements of GDL.

### **C 2.0 Classroom Standard Two: Understanding Vision and Vehicle Controls**

The student will:

- 2.1 explain and apply basic concepts related to vision and perception to operate a vehicle.
- 2.2 explain and apply basic motion control techniques needed to operate a vehicle while minimizing weight transfer.
- 2.3 explain and apply the four basic techniques related to steering control needed to operate a vehicle.
- 2.4 identify and practice use of communication techniques, courtesy and respect in regard to other roadway users.
- 2.5 identify and practice methods for stopping a vehicle.
- 2.6 identify and develop vehicle reference points to know where the vehicle is positioned to the roadway.

### **C 3.0 Classroom Standard Three: Introducing Traffic Entry Skills**

The student will:

- 3.1 recognize, understand, determine meaning, and relate roadway conditions, signs, signals, and pavement markings to make managed-risk driving decisions.
- 3.2 understand procedures and processes for basic vehicle maneuvering tasks.

### **C 4.0 Classroom Standard Four: Introducing Intersection Skills and Negotiating Curves and Hills**

The student will:

- 4.1. discover how visual skills and mental perception lead to managed-risk driving decisions.
- 4.2. select, maintain, and adjust speed to reduce risk of collision in compliance with rules of the road.

### **C 5.0 Classroom Standard Five: Space Management and Vehicle Control Skills in Moderate Risk Environments**

The student will:

- 5.1. review and apply the principles of a space management system (i.e., SEE) to managed-risk vehicle operation making appropriate communication, speed, and lane position adjustments.
- 5.2. demonstrate and practice basic vehicle maneuvers for managed-risk operation and identify and respond to divided attention tasks.
- 5.3. identify procedures and practice techniques for managed-risk lane changes in a variety of lane change situations.
- 5.4. identify procedures and practice techniques for managed-risk perpendicular, angle, and parallel parking.
- 5.5. identify procedures and practice techniques for reduced-risk speed management.



**C 6.0 Classroom Standard Six: Developing Traffic Flow and Space Management Skills at Speeds Below 55 m.p.h.**

The student will recognize and respond to:

- 6.1. roadway and traffic flow situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.2. space management situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.3. intersection entry situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.4. curve entry/apex/exit situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.5. planned passing situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.

**C 7.0 Classroom Standard Seven: Developing Traffic Flow and Space Management Skills at Highway Speeds.**

The student will recognize and respond to:

- 7.1. roadway and traffic flow situations on limited access roadways and roadways without limited access at maximum highway speeds.
- 7.2. space management situations on limited access roadways and roadways without limited access at maximum highway speeds.
- 7.3. merging, speed control, lane selection, and exiting situations on limited access roadways at maximum highway speeds.
- 7.4. gap selection, communication, speed control, and lane selection during passing situations on limited access roadways at maximum highway speeds.

**C 8.0 Classroom Standard Eight: Factors Affecting Driver Performance**

The student will:

- 8.1. identify the high-risk effects of alcohol, marijuana, and other drugs, including prescription drugs on personality and driver performance.
- 8.2. recognize legal responsibility to not use alcohol, marijuana and other drugs that affect ability to operate a vehicle safely and develop strategies for alternative means of safe transportation.
- 8.3. understand the need for driver fitness to aid managed-risk driver performance and recognize that external and internal vehicle distractions, fatigue, and aggression may result in injury and physical damage crashes.
- 8.4. understand the impact of temporary impairments and long-term disabilities and the strategies to compensate and enhance for managed-risk driver performance.
- 8.5. identify risk factors affecting other drivers' performance and describe low-risk responses.

**C 9.0 Classroom Standard Nine: Managing Adverse Conditions**

The student will:

- 9.1. recognize how adverse weather conditions can impact visibility and traction; and respond by adjusting speed to meet the ability to steer and stop within the limits of the conditions.
- 9.2. recognize how adverse weather conditions create visibility and traction problems and the effect on space management skills in regard to speed and position adjustments.
- 9.3. recognize how night driving creates a visibility problem and how this affects space management in regard to speed and position adjustments.

**C 10.0 Classroom Standard Ten: Other Roadway Users**

The student will:

- 10.1 describe the characteristics and limitations of other motorized vehicles that may have different weight, speed, and visibility problems and respond with appropriate space management principles.
- 10.2 describe the characteristics and limitations of small, lightweight motorized and non-motorized vehicles and pedestrians that may have different speed and visibility problems and respond with appropriate space management principles.
- 10.3 describe the characteristics and limitations of tracked vehicles (trains and trolleys) that may have different weight, speed, and visibility problems and respond with appropriate space management principles.

**C 11.0 Classroom Standard Eleven: Responding to Emergencies, Vehicle Malfunctions and Crashes**

The student will:

- 11.1. recognize and respond to vehicle malfunctions in a managed-risk manner; understand vehicle braking and safety features; and utilize proper braking techniques.
- 11.2. understand and relate how the roadway system is managed by police and state agencies to help deal with emergencies and vehicle malfunctions.
- 11.3. recognize the responsibilities for attending to a crash scene situation.

**C 12.0 Classroom Standard Twelve: Understanding Advanced Driver-Assistance Systems (ADAS) Safety Features**

The student will:

- 12.1 identify vehicle safety technology
- 12.2 describe advanced driver-assistance systems (ADAS), including the benefits and concerns, that enhance the safety of the driver and other users of the highway transportation system.
- 12.3 identify safety features within the categories of advanced driver-assistance system safety features.
- 12.4 identify the performance abilities and limitations of current safety features.
- 12.5 understand how to use safety features safely and effectively.

**C 13.0 Classroom Standard Thirteen: Making Informed Consumer Choices**

The student will:

- 13.1. perform map reading and trip planning exercises using current and emerging technology that lead to an in-car family trip activity.
- 13.2. recognize problems consumers confront when making wise choices in purchasing insurance or an automobile.
- 13.3. describe future operator responsibilities in regard to licensing.
- 13.4. identify operator responsibilities in regard to traffic stops.
- 13.5. identify techniques for safely towing a boat or trailer or driving a special vehicle.
- 13.6. describe the impact vehicles have on the environment and develop strategies to reduce the carbon footprint.

## Overview of In-car Standards for Novice Driver Education

While participating in the state approved driver education 10 hour in-car training program and 12 hours observation comprised of not less than 20 sessions of 30-minute training segments, the participating student will demonstrate proficiency of the following tasks in 20 planned instructional routes.

### **IC 1.0. In-car Standard One: Preparing to Operate a Vehicle.**

- 1.1 Preparations to Operate Vehicle.** The student will recognize the visible space around the vehicle, the necessity of making routine vehicle checks and adjustments prior to and after entering the vehicle, identify the location of alert and warning symbol lights, identify, and understand advanced driver-assistance system safety features, understand the operation of vehicle control and safety devices, and discover vehicle balance concepts when braking, accelerating, and steering.
- 1.2 Judgment of Vehicle to Roadway Position.** The student will recognize and analyze the standard and personal vehicle guides or reference points relationship to roadway position and vehicle placement.

### **IC 2.0. In-car Standard Two: Introducing Traffic Entry and Intersection Approach Skills.**

The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments. Topics include:

- 2.1 Visualization of Intended Travel Path**
- 2.2 Searching Intended Travel Path**

### **IC 3.0. In-car Standard Three: Developing Visual and Mental Perception for Vehicle Control Tasks.**

The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk, low risk, moderate risk, and complex risk environments including basic vehicle control, space management, and apply the state vehicle law and rules of the road. Topics include:

- 3.1 Speed Control**
- 3.2 Lane Position Selection**
- 3.3 Rear Zone Searching and Control**
- 3.4 Following Time and Space**
- 3.5 Communication and Courtesy**
- 3.6 Sequential Steps to Problem-Solving (i.e., SEE)**
- 3.7 Practice Commentary**

### **IC 4.0. In-car Standard Four: Responding to Emergency Situations.**

- 4.1 Divide Focal and Mental Attention Between Intended Target, Travel Path, and Other Tasks.** The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments.
- 4.2 Identify, Assess and Respond to Vehicle Emergencies.** The student will describe appropriate ways to prevent having a vehicle emergency and identify, assess, and respond to vehicle emergencies, including engine failure, brake failure and tire pressure failure.
- 4.3 Identify, Assess and Respond to Environmental Conditions.** The student will describe appropriate ways to prevent having an environmental emergency and identify, assess, and respond to environmental conditions, including traction loss, vehicle tires dropping off the pavement, line of sight loss situations and loss of path travel situations.

**IC. 5.0. In-car Standard Five: Assessment of Driver Performance.**

- 5.1. Driver Assessment.** The student enrolled in a certified driver education program will be able to successfully demonstrate the key core behavioral patterns while performing the recommended procedures on a designated assessment route.
- 5.2. Assessment of Vehicle Safety Technology.** The student enrolled in a certified driver education program will be able to properly use and understand available vehicle safety technology.

### Relationship between Classroom and In-Car Standards

The following table describes how the classroom standards correlate with the in-car standards.

Classroom Standard	In-Car Standard
C 1.0 Classroom Standard One: Preparing To Operate a Vehicle C 2.0 Classroom Standard Two: Understanding Vehicle Controls	IC. 1.0 In-car Standard One: Preparing to Operate a Vehicle 1.1 Preparations to Operate Vehicle 1.2 Judgment of Vehicle to Roadway Position
C 3.0 Classroom Standard Three: Introducing Traffic Entry Skills C 4.0 Classroom Standard Four: Introducing Intersection Skills and Negotiating Curves and Hills	IC. 2.0 In-car Standard Two: Introducing Traffic Entry and Intersection Approach Skills 2.1. Visualization of Intended Travel Path 2.2 Searching Intended Travel Path
C 5.0 Classroom Standard Five: Space Management and Vehicle Control Skills in Moderate Risk Environments C 6.0 Classroom Standard Six: Developing Traffic Flow and Space Management Skills at Speeds Below 55 m.p.h. C 7.0 Classroom Standard Seven: Developing Traffic Flow and Space Management Skills at Maximum Highway Speeds C 10.0 Classroom Standard Ten: Other Roadway Users	IC. 3.0 In-car Standard Three: Developing Visual and Mental Perception for Vehicle Control Tasks 3.1 Speed Control 3.2 Lane Position Selection 3.3 Rear Zone Searching and Control 3.4 Following Time and Space 3.4 Communication and Courtesy 3.5 Using Three Steps to Problem-Solving (i.e., SEE)
C 8.0 Classroom Standard Eight: Factors Affecting Driver Performance	Not covered in-car
C 9.0 Classroom Standard Nine: Managing Adverse Conditions C 11.0 Classroom Standard Eleven: Responding to Emergencies, Vehicle Malfunctions and Crashes	IC. 4.0 In-car Standard Four: Responding to Emergency Situations 4.1 Divide Focal and Mental Attention Between 4.2 Identify, Assess and Respond to Vehicle Emergencies 4.3 Identify, Assess and Respond to Environmental Conditions
C 12.0 Classroom Standard Twelve: Understanding Advanced Driver-Assistance Systems (ADAS) Safety Features	IC 5.0 In-car Standard Five: Assessment of Driver Performance 5.2. Assessment of ADAS Safety Features
C 13.0 Classroom Standard Thirteen: Making Informed Consumer Choices	Not covered in-car

## Essential Knowledge and Skills for Driver and Traffic Safety Education

### Driver and Traffic Safety Education: Classroom

- (A) General Requirements.** Driver education is generally a required prerequisite to qualify for a driver permit between 14 years 6 months and before age 18 dependent on state licensing requirements.
- (B) Introduction.** State regulated driver and traffic safety education provides the foundation for students, assisted by parents/mentors, to begin the lifelong learning process of managed risk driving practices. Students acquire essential knowledge, skills, and experiences to perform managed risk driving in varying traffic environments. Satisfactory completion of the driver and traffic safety education course prepares the student to continue the graduated driver licensing process.
- (C) Responsibilities.** Teachers manage student efforts to meet or exceed minimum competency standards through a classroom instruction that includes student-centered activities, modeling, knowledge assessment, skill assessment, guided observation, and parental involvement. Concurrent and integrated operation of classroom and in-car instruction is required for student knowledge and skill development.

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### (D) Classroom Knowledge and Skills Standards.

#### C 1.0 Classroom Standard One: Preparing to Operate a Vehicle

The student will:

- 1.1 become aware of program goals through a student/parent orientation.
- 1.2 recognize and comply with the rules of the road based on national, state, and local requirements.
- 1.3 recognize and illustrate vehicle operating space needed for managed-risk operation.
- 1.4 understand and practice processes and procedures for preparing to drive a vehicle. This includes being aware of and knowing how to utilize vehicle safety technology.
- 1.5 describe the value of occupant protection as a crash prevention and loss prevention tool for managed-risk driver performance.
- 1.6 identify and practice a procedure for starting a vehicle.
- 1.7 identify and practice a procedure for securing a vehicle.
- 1.8 attend the student/parent debriefing at the conclusion of the course and complete the requirements of GDL.

*This standard relates to Standard IC 1.0.*

*The following details explain the content standards listed above.*

#### C 1.1 Student will become aware of program goals through a student/parent orientation.

- 1.1.1 Make introductions with instructor
- 1.1.2 Understand purpose of orientation session
- 1.1.3 Understand how the driver education program will be conducted
- 1.1.4 Identify the Graduated Driver Licensing (GDL) requirements and responsibilities
- 1.1.5 Complete course registration forms
- 1.1.6 Understand course requirements, policy, rules, and documentation for successful completion
- 1.1.7 Identify student classroom rules
- 1.1.8 Identify student in-car rules
- 1.1.9 Identify in-car driving plan and routes

- 1.1.10 Understand driving with temporary impairment and permanent disabilities.
  - a. Use of controlled substances (illegal and legal drugs that are controlled by the government and are more likely to be abused by individuals)
  - b. Use of prescription and over the counter medicines
- 1.1.11 Identify program, student, parent and teacher partnership and responsibilities.
- 1.1.12 Identify the need for maintaining communications
- 1.1.13 Identify injury risk for teens.
- 1.1.14 Identify managed risk driving goals.

**C 1.2 Student will recognize and comply with the rules of the road based on state and local requirements.**

- 1.2.1 Signs, signals, and markings
- 1.2.2 Legal stops and restricted speeds
- 1.2.3 Pedestrian and bicyclist rights and duties
- 1.2.4 Safety responsibility law
- 1.2.5 Speed regulations
- 1.2.6 Laws related to impaired driving
- 1.2.7 Driver handbook references

**C 1.3 Student will recognize and illustrate vehicle operating space needed for managed-risk operation.**

- 1.3.1 Identify visual limitations to the front, rear and sides of the vehicle
- 1.3.2 Identify the length and width of the vehicle's blind zones
- 1.3.3 Identify size of vehicle tire contact patches
- 1.3.4 Adjust rear and side view mirror settings
  - a. Identify traditional mirror settings used for some vehicles
  - b. Identify blind zones and the use of enhanced mirror settings

**C 1.4 Student will understand and practice processes and procedures for preparing to drive a vehicle.**

- 1.4.1 Understand mental and physical well-being
- 1.4.2 Manage emotions
- 1.4.3 Protect others by using provided safety equipment
- 1.4.4 Pre-entry checks
  - a. Approach vehicle with key/key fob and be alert for other pedestrians and drivers
  - b. Check outside and inside the vehicle prior to entry for a variety of concerns (e.g., broken glass, fluid leaks, objects, children, pets, snow build up, tires)
- 1.4.5 Lock doors after entry
- 1.4.6 Make vehicle adjustments
  - a. Head restraints
  - b. Seat
  - c. Rear and side view mirrors
  - d. Safety restraints
  - e. Steering wheel
  - f. Pedals
  - g. Adaptive systems (e.g., steering mechanism or hand controls), if necessary
- 1.4.7 Understand gauges, electronics, and accessories
- 1.4.8 Alert and warning symbols and locations
- 1.4.9 Vehicle control devices
- 1.4.10 Safety, communication, comfort, and convenience devices

- 1.4.11 Alerts to vehicle safety technology system malfunctions
- 1.4.12 Worn or dirty sensors/devices
- 1.4.13 Purpose and use of vehicle's owner's manual
- 1.4.14 Routine vehicle checks
- 1.4.15 Tire safety
  - a. Tire pressure
  - b. Tread depth
  - c. Tire wear and damage

**C 1.5 Student will describe the value of occupant protection as a crash prevention and loss prevention tool for managed-risk driver performance.**

- 1.5.1 Occupant protection knowledge
  - a. Active restraints
  - b. Passive restraints
  - c. Active passive integration
  - d. Frontal crash protection
  - e. Side impact protection
  - f. Rear impact protection
- 1.5.2 Occupant protection use and misuse
  - a. Myths
  - b. Lap belt adjustments
  - c. Shoulder restraint adjustments
  - d. Legal requirements
- 1.5.3 Protecting children
  - a. Age and seat requirements
  - b. Weight and seat requirements
  - c. Proper seat placement
  - d. Legal requirements
- 1.5.4 Vehicle control
  - a. Safety belt adjustments
  - b. Airbag and steering control
  - c. Active passive integration assist (APIA)
  - d. Front impact
  - e. Side impact
  - f. Rear impact

**C 1.6 Student will identify and practice the procedures for starting a vehicle**

- 1.6.1 Check and ensure that the parking brake is set
- 1.6.2 Press the brake
- 1.6.3 Select appropriate gear for starting vehicle
- 1.6.4 Recognize alert lights and symbols for safety accessories
- 1.6.5 Operate ignition starting device
- 1.6.6 Select and operate appropriate vehicle accessories
- 1.6.7 Recognize warning lights and symbols for engine or system accessories



**C 1.7 Student will attend the student/parent debriefing at the conclusion of the course and continue meeting the requirements of the GDL.**

- 1.7.1 Review program driver skill log requirements
- 1.7.2 Evaluation of destination driving route
- 1.7.3 Review licensing requirements
- 1.7.4 Student responsibilities
- 1.7.5 Media advertising
- 1.7.6 Use of natural resources
- 1.7.7 Parent responsibilities
- 1.7.8 Making safe vehicle choices

**C 2.0 Classroom Standard Two: Understanding Vision and Vehicle Controls**

The student will:

- 2.1 explain and apply basic concepts related to vision and perception to operate a vehicle.
- 2.2 explain and apply basic motion control techniques needed to operate a vehicle while minimizing the amount and rate of weight transfer.
- 2.3 explain and apply the four basic techniques related to steering control needed to operate a vehicle.
- 2.4 identify and practice use of communication techniques, courtesy and respect in regard to other roadway users.
- 2.5 identify and practice methods for stopping a vehicle.
- 2.6 identify and develop vehicle reference points to know where the vehicle is positioned to the roadway.

*This standard relates to Standard IC 1.0.*

*The following details explain the content standards listed above.*

**C 2.1 Student will explain and apply basic concepts related to vision and perception to operate a vehicle.**

- 2.1.1 Identify vision and mental perception requirements:
  - a. Three basic visual fields (central, fringe or focal, peripheral) and how they are used in the driving task
  - b. Compare visual skills to mental perception
  - c. Techniques to improve visual skills
  - d. Techniques to improve mental perception of traffic events
  - e. Overcoming visual deficiencies
- 2.1.2 identify open space prior to moving from brake to accelerator
- 2.1.3 Identify visual target
- 2.1.4 Follow path of travel to target
- 2.1.5 Reference vehicle to path of travel
- 2.1.6 Maintain an open line of sight 20-30 seconds ahead
- 2.1.7 Develop searching skills based on dividing visual and mental attention between two or more tasks

**C 2.2 Student will explain and apply basic braking and acceleration control techniques needed to operate a vehicle while controlling weight transfer.**

2.2.1 Recognize how speed affects vehicle direction

2.2.2 Place the vehicle into motion smoothly

- a. Changing vehicle load—side to side (vehicle roll)
  - i. Steering movements
  - ii. Brake and steering combinations
- b. Changing vehicle load—front to rear (vehicle pitch)
  - i. Releasing brake suddenly
  - ii. Covering brake downhill
  - iii. Light accelerator pressure
  - iv. Progressive accelerator pressure
  - v. Thrust accelerator pressure
  - vi. Excessive acceleration
- c. Changing vehicle load—rear to front (vehicle pitch)
  - i. Releasing accelerator
  - ii. Controlled braking (Squeeze on)
  - iii. Threshold braking (Firm pressure prior to lockup)
  - iv. Trailing brake (Squeeze off)
  - v. Excessive deceleration affects weight
- d. Changing vehicle load—pivot around center of gravity (vehicle yaw)
  - i. Sudden braking inputs create traction loss
  - ii. Sudden acceleration inputs create traction loss
  - iii. Sudden steering inputs create traction loss

2.2.3 Identify how safety belts maintain seating position and keep the driver in-contact with the steering wheel

2.2.4 Identify how the dead pedal allows driver to feel roll, pitch, and yaw characteristics

**C 2.3 Student will explain and apply the four basic techniques related to steering control needed to operate a vehicle.**

2.3.1 Hand-to-hand steering (Push/Pull)

- a. Hand position (9-3, 8-4)
- b. Precision maneuvers
- c. Steering through curves
- d. Intersection turning
- e. Lane change

2.3.2 Hand-over-hand steering

- a. Hand position (9-3, 8-4)
- b. Left or right side of wheel used
- c. Speed under 15 mph
- d. Tight turning efforts (alley way, parking lots, etc.)
- e. Perpendicular and parallel parking

2.3.3 Evasive steering

- a. Hand position (9-3)
- b. Maximum steering inputs are 180 degrees
  - i. Input to move front of vehicle
  - ii. Input to move rear of vehicle
  - iii. Input to center vehicle in lane

2.3.4 One-hand steering

- a. Hand Position (12)
  - i. Backing vehicle
  - ii. Hand moves in direction of intended vehicle movement
- b. Hand Position (6)
  - i. Backing vehicle
  - ii. Hand moves in direction of intended trailer movement
- c. Hand Position (9 or 3, 8 or 4)
  - i. Using vehicle controls with right or left hand
  - ii. Using gear shifting device with right hand

**C 2.4 Student will identify and practice use of communication techniques, courtesy and respect in regard to other roadway users.**

2.4.1 Identify Technique

- a. Use of turn signal before turning right or left
- b. Use of turn signal or lane change device to move to another lateral position
- c. Use of headlights on at all times to increase visibility to others
- d. Use of horn to make others aware of your presence
- e. Tap of brake lights to warn rear traffic of a slowdown or stop in the traffic flow
- f. Use of vehicle speed and position to communicate the driver's upcoming action
- g. Use of hazard lights to warn drivers of a danger ahead

2.4.2 Identify Timing

- a. Engage turn signal for a minimum of five seconds prior to moving to provide time for the communication to be sent, received, and acted upon
- b. Communicate early for control of a safe path of travel

2.4.3 Identify Upcoming Action

- a. Identify that messages are acknowledged by others

**C 2.5 Student will identify and practice methods for stopping a vehicle.**

- 2.5.1 Search effectively ahead of the vehicle to determine braking needs
- 2.5.2 Check rear zone/space prior to braking
- 2.5.3 Use controlled braking efficiently with heel of foot on floorboard
- 2.5.4 Apply a firm squeezing braking force at the beginning of the braking process
- 2.5.5 Bring the vehicle to a smooth stop
- 2.5.6 Recognize that braking action affects vehicle body pitch toward the front
- 2.5.7 Utilize trail braking during last two seconds of braking to ease pitch of vehicle
- 2.5.8 Check the rear zone/space before, during and after braking actions
- 2.5.9 Effective use of ABS braking and other vehicle safety technologies.

**C 2.6 Student will identify and practice a procedure for securing a vehicle.**

- 2.6.1 Stop the vehicle in a safe and legal location and press on the brake.
- 2.6.2 Set parking brake as required by state statute and owner's manual.
- 2.6.3 Shift into appropriate gear before releasing brake.
- 2.6.4 Turn off appropriate accessories prior to turning off vehicle.
- 2.6.5 Check the rear seat for children or pets.
- 2.6.6 Use a technique such as the Dutch Reach to prevent opening a door into the path of an approaching road user.
- 2.6.7 Lock doors and/or secure available alarm system.

**C 2.7 Student will identify and develop vehicle reference points to know where the vehicle is positioned to the roadway.**

**2.7.1 Use Reference Points to Identify Lane Positions**

- a. Center of lane or lane position 1
- b. Left side of lane or lane position 2
- c. Right side of lane or lane position 3

**2.7.2 Identify Right Side Vehicle References**

- a. Determine when the vehicle is positioned within 3-6 inches of the curb or a lane line (right side of lane or lane position 3)
- b. Determine when the vehicle is positioned within 2-3 feet of the curb or a lane line (center or lane position 1)

**2.7.3 Identify Left Side Vehicle References**

- a. Determine when the vehicle is positioned within 3-6 inches of the curb or a lane line (left side of lane or lane position 2)
- b. Determine when the vehicle is positioned within 2-3 feet of the curb or a lane line (center or lane position 1)

**2.7.4 Identify Front Vehicle References**

- a. Determine when the front bumper is positioned even with the stop line or curb edge

**2.7.5 Identify Rear Vehicle References**

- a. Determine when the rear bumper is positioned even with a line

**2.7.6 Identify Front Turning Point of Vehicle**

- a. Determine where the front is positioned for turning left
- b. Determine where the front is positioned for turning right

**2.7.7 Identify Rear Turning Point of Vehicle**

- a. Determine where the rear is positioned for backing left
- b. Determine where the rear is positioned for backing right

**2.7.8 Visualization of Intended Travel Path**

- a. Identify Target
  - i. Identify a stationary object or area that appears in the center and at the end of your intended travel path
- b. Identify Target Area
  - i. Identify the traffic problems and elements in and near the target area
  - ii. Locate your target area, evaluate the line of sight or path of travel conditions and determine best approach speed and lane position
- c. Identify Targeting Path
  - i. Evaluate the target area, while developing an image of your targeting path
  - ii. Identify elements that can change or modify the intended travel path
  - iii. Determine risks associated with maintaining the intended path of travel

**2.7.9 Rules of the Road**

- a. Yield right of way
- b. Intersection
  - i. Approach
  - ii. Where to stop

### C 3.0 Classroom Standard Three: Introducing Traffic Entry Skills

The student will:

- 3.1. recognize, understand, determine meaning, and relate roadway conditions, signs, signals, and pavement markings to make managed-risk driving decisions.
- 3.2. understand procedures and processes for basic vehicle maneuvering tasks.

*This standard relates to Standard IC 2.0.*

*The following details explain the content standards listed above.*

#### **C 3.1 Student will recognize, understand, determine meaning, and relate roadway conditions, signs, signals, and pavement markings to make managed-risk driving decisions. (For a complete listing of all signs, signals, pavement markings refer to your state's motor vehicle code.)**

- 3.1.1 Identify roadway characteristics
  - a. Recognize intersection types
    - i. Uncontrolled
    - ii. Controlled by sign or signal
    - iii. Crossroad with through road
    - iv. Crossroad without through road
    - v. Highway-rail grade crossing
    - vi. T- and Y-style
    - vii. Traffic circle/round-about
  - b. Recognize traffic calming devices
  - c. Recognize surface conditions
  - d. Recognize slope and grade
  - e. Recognize traction (adhesion/grip) potential
  - f. Recognize highway conditions
    - i. Roadway
    - ii. Shoulder
    - iii. Off-road areas
  - g. Recognize lane controls
- 3.1.2 Identify signs, signals, and pavement markings
  - a. Recognize Meaning
    - i. Shapes
    - ii. Color
    - iii. Symbols
    - iv. Legend/message
  - b. Recognize locations
  - c. Recognize legal controls
    - i. Stop
    - ii. Yield
    - iii. Traffic Flow
    - iv. Regulations
- 3.1.3 Identify pavement markings/symbols
  - a. Recognize meaning
    - i. Color
      - Yellow

- White
- Red
- Blue

Green ii. Pavement Markings

- Dashed
- Solid
- Striped
- Curb markings

3.1.4 Recognize location

- a. Recognize legal controls
  - i. Passing
  - ii. Crosswalk
  - iii. Lane storage
  - iv. Turn position

**C 3.2 Student will understand procedures and processes for basic vehicle maneuvering tasks.**

3.2.1 Identify and apply procedural steps

- a. Intersection approach
  - i. See and respond to open/closed space/zones
  - ii. Check and respond to rear space/zone conditions
  - iii. Establish and maintain proper lane usage and speed control
  - iv. Search left, front, and right spaces/zones for line of sight or path of travel changes
  - v. Find open spaces/zones before entering
  - vi. Use legal, safety stop and staggered when applicable
  - vii. See condition of a traffic signal
  - viii. Adjust speed to arrive at a green light
    - See closed front space/zone
    - Adjust speed to reduce closure rate and to arrive in an open space/zone
    - Adjust speed to have at least one open side space/zone
- b. Moving forward
- c. Precision left turns
- d. Precision right turns
- e. Moving to/from the curb
- f. Backing
  - i. Straight
  - ii. Around corner
- g. Lane change

3.2.2 Identify and apply driver information processing

- a. Understand vision and mental perception requirements
- b. Estimate time needed to cross, turn left, or turn right
- c. Critical thinking, decision making, and problem solving

3.2.3 Introduction of the sequential steps for problem solving (i.e., SEE)

- a. Understand conditions for searching
  - i. Changes to path of travel
  - ii. Changes to the line of sight
  - iii. Changes in road surface and condition
- b. Understand situations for evaluating
  - i. Alternative paths of travel

- ii. Appropriate position
  - iii. Appropriate speed
  - iv. Appropriate communication
- c. Understand skills needed to execute decisions
  - i. Speed changes
  - ii. Position changes
  - iii. Communication needs
- 3.2.4 Describe rules of the road
  - a. Identify yielding right of way
  - b. Identify signal use
  - c. Lane position rules at intersections
  - d. Intersection rules
  - e. Signs, signals, and markings rules
  - f. Backing rules

## **C 4.0 Classroom Standard Four: Introducing Intersection Skills and Negotiating Curves and Hills**

The student will:

- 4.3. discover how visual skills and mental perception lead to making managed-risk driving decisions.
- 4.4. select, maintain, and adjust speed to reduce risk of collision in compliance with rules of the road.

*This standard relates to Standard IC 2.0.*

*The following details explain the content standards listed above.*

### **C 4.1 Student will discover how visual skills and mental perception lead to making managed-risk driving decisions.**

- 4.1.1 Recognize need to divide focal vision and mental attention between intended target, travel path and other tasks
  - a. Move focal vision from target area to another location and back to target area
  - b. Move focal vision within ½ second time frames
  - c. Use active searching to allow brain to perceive information
- 4.1.2 Identify target area searching
  - a. Search to target area, evaluate the conditions and determine entry speed and position
  - b. Search for line of sight or path of travel changes affecting approach to target area
  - c. Approach target area, while continually re-evaluating risks in the immediate 4-8 second travel path
  - d. Approach the target area, search for a new target area and new travel path
- 4.1.3 Know how to judge space in seconds
  - a. Search 20-30 seconds ahead to identify potential problems
  - b. Visualize the space the vehicle will occupy at least 12-15 seconds ahead
  - c. Search 8-12 seconds ahead to identify an alternate path of travel
  - d. Continually evaluate the 4-8 second immediate path
  - e. Speed and/or lane position adjustments may be required when the target area cannot be seen
- 4.1.4 Identify changes to line of sight or path of travel
  - a. Evaluate modification in the ability to see or maintain a travel path

- b. Identify when line of sight or path of travel change are recognized, the need to evaluate other zones/spaces for speed and lane adjustments
- 4.1.5 Identify open, closed or changing zones/spaces
  - a. Identify the intended travel path for open, closed or changing conditions
  - b. Evaluate open, closed or changing conditions for speed and position adjustments
- 4.1.6 Search intersections
  - a. Search for open zones/space to the left, front and right, when approaching an intersection including highway-rail grade crossings
  - b. Evaluate closed or changing zones/spaces and make necessary speed and/or lane position adjustments, when approaching an intersection
  - c. Search for open zones/spaces to the left, front and right, before entering an intersection
- 4.1.7 Search into curves and over hills
  - a. Search the line of sight and path of travel through the curve or over the hill crest for closed or changing conditions
  - b. Evaluate the line of sight or path of travel for appropriate speed and position adjustments, before entering a curve or a hill crest

**C 4.2 Student will select, maintain, and adjust speed to reduce risk of collision in compliance with rules of the road.**

- 4.2.1 Select safe speed
  - a. Determine travel speed based upon driver, vehicle, legal, roadway, and environmental limitations
  - b. Determine speed adjustment needed for managed risk
  - c. Since states have set different speed limits for residential, rural, urban, and interstate roads, it is important to adjust your speed to posted speed limits, the type of roadway, and roadway conditions.
  - d. Check gauges, mirrors, and evaluate line of sight or path of travel conditions
- 4.2.2 Recognize changes in line of sight or path of travel
  - a. Avoid using acceleration into a closed or changing zone/space
  - b. Recognize a closed zone/space (such as a red light or stopped traffic), adjust speed to arrive at an open zone/space
  - c. When ability to see a line of sight or path of travel is reduced, adjust speed to maintain or establish an open zone/space



## **C 5.0 Classroom Standard Five: Space Management and Vehicle Control Skills in Moderate Risk Environments**

The student will:

- 5.1. review and apply the principles of a space management system (i.e., SEE) to managed-risk vehicle operation making appropriate communication, speed, and lane position adjustments.
- 5.2. demonstrate and practice basic vehicle maneuvers for managed-risk operation and identify and respond to divided attention tasks.
- 5.3. identify procedures and practice techniques for managed-risk lane changes in a variety of lane change situations.
- 5.4. identify procedures and practice techniques for managed-risk perpendicular, angle and parallel parking.
- 5.5. identify procedures and practice techniques for reduced-risk speed management.

*This standard relates to Standard IC 3.0.*

*The following details explain the content standards listed above.*

### **C 5.1 Student will review and apply the principles of a sequential steps for problem solving (i.e., SEE) to managed-risk vehicle operation making appropriate communication, speed and lane position adjustments.**

- 5.1.1 Divide attention between path of travel and other tasks
- 5.1.2 Use an orderly visual search process
- 5.1.3 Control of space to front
- 5.1.4 Use rear and side view mirrors effectively
- 5.1.5 Maintain separation to sides and rear
- 5.1.6 Communicate presence/intentions
- 5.1.7 Manage intersections effectively
- 5.1.8 Practice commentary response
  - a. Identify speed and position adjustment development
  - b. Identify reference points for maneuvers
  - c. Identify rear space/zone view conditions
- 5.1.9 Identify blind zones for different vehicles

### **C 5.2 Student will demonstrate and practice basic vehicle maneuvers for managed-risk operation.**

- 5.2.1 Identify divided attention tasks
- 5.2.2 Identify intersection maneuvers
- 5.2.3 Identify procedures for backing in a straight line
- 5.2.4 Identify procedures for backing around a corner
- 5.2.5 Determine lowest risk turn around options
  - a. Identify space management considerations
    - i. Communication
    - ii. Procedures
    - iii. Position to curb
    - iv. Speed control
    - v. Steering control
    - vi. Vision control
  - b. Identify when it is safer to go around the block

- c. Identify safe behaviors for turning around in a parking lot
- d. Identify procedures for a turnabout with entry into a roadway, alley or driveway on the left or by backing around a corner to the right
- e. Identify procedures for a U-turn
- f. Identify procedures for a three-point (on-street) turnabout in a low-risk roadway environment
- g. Identify procedures for turning around in a cul-de-sac, round-about or circular drive turnabout

**C 5.3 Student will identify procedures and practice techniques for making managed-risk lane changes in a variety of lane change situations.**

- 5.3.1 Identify space management requirements
  - a. Determine the need for a lane change
  - b. Identify divided attention conditions
  - c. Identify communication techniques
  - d. Determine speed and lane position adjustments
- 5.3.2 Identify procedures and practice lane change techniques
  - a. Evaluate space/zones and side view mirror blind zones
  - b. Move to the left side of lane for left lane change
  - c. Move to right side of lane for right lane change
  - d. Signal
  - e. Check blind zones
  - f. Decide best lane position for conditions
- 5.3.3 Lane Position
- 5.3.4 Speed control
- 5.3.5 Steering control
- 5.3.6 Identify vehicle blind zones and truck no zones

**C 5.4 Student will identify procedures and practice techniques for making managed-risk perpendicular, angle, and parallel parking.**

- 5.4.1 Entering a parking space
  - a. Space management applications
  - b. Dividing attention between tasks
  - c. Communication
  - d. Identify procedures and practice parking techniques
    - i. Positioning/reference points
    - ii. Vision control
    - iii. Speed control
    - iv. Steering control
    - v. Forward
    - vi. Reverse
- 5.4.2 Exiting a parking space
  - a. Space management applications
  - b. Dividing attention between tasks
  - c. Communication
  - d. Identify procedures and practice parking techniques
    - i. Positioning/Reference Points
    - ii. Vision control

- iii. Speed control
- iv. Steering control
- v. Forward
- vi. Reverse

**C 5.5 Student will identify procedures and practice techniques for reduced-risk speed and space management.**

- 5.5.1 Visibility
- 5.5.2 Dividing attention
- 5.5.3 Traffic controls
- 5.5.4 Driver condition
- 5.5.5 Road condition
- 5.5.6 Vehicle condition
- 5.5.7 Space to front/rear and to the sides
- 5.5.8 Other roadway users
- 5.5.9 Traffic flow
- 5.5.10 Vehicle dynamics
- 5.5.11 Speed differentials

**C 6.0 Classroom Standard Six: Developing Traffic Flow and Space Management Skills at Speeds Below 55 m.p.h.**

The student will recognize and respond to:

- 6.1. roadway and traffic flow situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.2. space management situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.3. intersection entry situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.4. curve entry/apex/exit situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.
- 6.5. planned passing situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.

*This standard relates to Standard IC 3.0.*

*The following details explain the content standards listed above.*

**C 6.1 Student will identify and comply with roadway and traffic flow situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.**

- 6.1.1 Dividing attention between tasks
- 6.1.2 Sharing the roadway with motorized and non-motorized users
- 6.1.3 Following and being followed
- 6.1.4 Entering and exiting curves
- 6.1.5 Traffic flow to each side of vehicle
- 6.1.6 Multiple use and reversible lanes
- 6.1.7 Oncoming traffic gap selection
- 6.1.8 Crossing traffic gap selection

- 6.1.9 Multiple lane passing
- 6.1.10 Vehicle blind zones and truck no zones

**C 6.2 Student will identify and comply with space management situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.**

- 6.2.1 Identify techniques to control space around the vehicle
- 6.2.2 Understand the need to divide attention between tasks
- 6.2.3 Identify appropriate mirror use
- 6.2.4 Recognize vehicle blind zones and truck no zones
- 6.2.5 Maintain separation to sides and rear
- 6.2.6 Communicate presence/intentions
- 6.2.7 Describe multiple lane use and reversible lanes
- 6.2.8 Describe procedures for approaching and exiting a curve
- 6.2.9 Perform commentary responses
  - a. Speed and position changes development
  - b. Rear space/zone response development

**C 6.3 Student will identify and comply with intersection entry situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.**

- 6.3.1 Space management applications
- 6.3.2 Dividing attention between tasks
- 6.3.3 Unique signs, signals, and markings
- 6.3.4 Communication
- 6.3.5 Types of intersections
- 6.3.6 Level of traffic flow congestion
- 6.3.7 Estimate time needed to cross, turn right, or turn left
- 6.3.8 Identify number of usable lanes
- 6.3.9 Procedures
- 6.3.10 Lane position
- 6.3.11 Speed control
- 6.3.12 Steering control

**C 6.4 Student will identify and comply with curve entry/apex/exit situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.**

- 6.4.1 Space management applications
- 6.4.2 Dividing attention between tasks
- 6.4.3 Communication
- 6.4.4 Unique signs, signals, and markings
- 6.4.5 Procedures
- 6.4.6 Lane position
- 6.4.7 Speed control
- 6.4.8 Steering control

**C 6.5 Student will identify and comply with planned passing situations on limited access roadways and roadways without limited access at speeds up to 55 m.p.h.**

- 6.5.1 Space management applications
- 6.5.2 Dividing attention between tasks

- 6.5.3 Communication
- 6.5.4 Procedures
- 6.5.5 Lane position
- 6.5.6 Speed control
- 6.5.7 Steering control
- 6.5.8 Stopping distance
- 6.5.9 Abort considerations
- 6.5.10 Passing/being passed

## **C 7.0 Classroom Standard Seven: Dealing with Complex Environments at Highway Speeds**

The student will recognize and respond to:

- 7.1. roadway and traffic flow situations on limited access roadways and roadways without limited access at maximum highway speeds.
- 7.2. space management situations on limited access roadways and roadways without limited access at maximum highway speeds.
- 7.3. merging, speed control, lane selection, and exiting situations on limited access roadways at maximum highway speeds.
- 7.4. gap selection, communication, speed control, and lane selection during passing situations on limited access roadways at maximum highway speeds.

*This standard relates to Standard IC 3.0.*

*The following details explain the content standards listed above.*

### **C 7.1 Student will identify and comply with roadway and traffic flow situations on limited access roadways and roadways without limited access at maximum highway speeds.**

- 7.1.1 Non-motorized highway restrictions
- 7.1.2 Sharing the roadway with motorized and non-motorized users
- 7.1.3 Divided attention tasks
- 7.1.4 Vehicle size and movement
- 7.1.5 Following and being followed
- 7.1.6 Approach to curves
  - a. See curve in target area
  - b. Check all zones for options
  - c. Establish effective speed control
  - d. Left curve approach
  - e. Right curve approach
- 7.1.7 Entering and exiting limited access highways
  - a. Unique signs, signals, and markings
  - b. Communication
  - c. Types of interchanges
  - d. Level of traffic flow congestion
  - e. Identify number of usable lanes
- 7.1.8 Multiple use and reversible lanes
- 7.1.9 Traffic flow to each side of vehicle
- 7.1.10 Vehicle blind zones and truck no zones
- 7.1.11 Oncoming traffic gap selection
  - a. Crossing traffic gap selection

- b. Two-lane and multi-lane passing

**C 7.2 Student will identify and comply with space management situations on limited access roadways and roadways without limited access at maximum highway speeds.**

- 7.2.1 Control of space around vehicle
- 7.2.2 Dividing attention tasks
- 7.2.3 Appropriate mirror use
- 7.2.4 Vehicle blind zones and truck no zones
- 7.2.5 Maintain separation to sides and rear
- 7.2.6 Communicating presence/intentions
- 7.2.7 Effective management of merge/exit maneuvers
- 7.2.8 Commentary responses
  - a. Speed and position adjustment assessment
  - b. Rear space/zone observance assessment
- 7.2.9 Rules of the Road
  - a. Merging rules
  - b. Passing rules
  - c. Use of traffic flow control devices
  - d. Flashers
  - e. Vehicle lights
  - f. Towing
  - g. Emergency vehicles, including move-over laws

**C 7.3 Student will identify and comply with merging, speed control, lane selection, and exiting situations on limited access roadways at maximum highway speeds.**

- 7.3.1 Communication
- 7.3.2 Space management
- 7.3.3 Dividing attention tasks
- 7.3.4 Gap selection
- 7.3.5 Vehicle blind zones and truck no zones
- 7.3.6 Closure of space
- 7.3.7 Speed control
  - a. Managing speed on entrance ramp for maximum searching time and options
  - b. Effective speed on acceleration lane
  - c. Exiting
    - i. Plan ahead
    - ii. Test brakes
    - iii. Flat curves
- 7.3.8 Lane selection and position

**C 7.4 Student will identify and comply with gap selection, communication, speed control, and lane selection during passing situations on limited access roadways at maximum highway speeds.**

- 7.4.1 Procedures
- 7.4.2 Limited access highway advantages/disadvantages
- 7.4.3 Passing/overtaking on right side of vehicles
- 7.4.4 Space management
- 7.4.5 Divided attention tasks
  - a. Identify tailgater problems for speed and lane position adjustments
  - b. Evaluate gain versus risk prior to attempting passing maneuver

- c. Check all zones for line of sight and/or path of travel conditions
- 7.4.6 Vehicle blind zones and truck no zones
- 7.4.7 Communication
- 7.4.8 Speed control
- 7.4.9 Steering control
- 7.4.10 Stopping ability limited
- 7.4.11 Abort considerations
- 7.4.12 Passing/being passed considerations

## **C 8.0 Classroom Standard Eight: Factors Affecting Driver Performance**

The student will:

- 8.1. identify the high-risk effects of alcohol, marijuana, and other drugs, including prescription drugs on personality and driver performance.
- 8.2. recognize legal responsibility to not use alcohol, marijuana and other drugs that affect the ability to operate a vehicle safely and develop strategies for alternative means of safe transportation.
- 8.3. understand the need for driver fitness to aid managed-risk driver performance and recognize that external and internal vehicle distractions, fatigue, and aggression that can cause inattention to task and may result in injury and physical damage crashes.
- 8.4. understand the impact of temporary impairments and long-term disabilities and the strategies to compensate and enhance for managed-risk driver performance.
- 8.5. identify risk factors affecting other driver's performance and describe low risk responses.

*The following details explain the content standards listed above.*

### **C 8.1 Student will identify the high-risk effects of alcohol, marijuana and other drugs, including prescription drugs on personality and driver performance.**

- 8.1.1 Recognizing alcohol, marijuana, and other drugs, including prescription drugs effect on teens
- 8.1.2 Teen risk factors for alcohol, marijuana, and other drugs, including prescription drug use/abuse
- 8.1.3 Limiting risk of driving/riding with others that are intoxicated
- 8.1.4 The effect of alcohol, marijuana, and other drugs, including prescription drugs on driver performance
- 8.1.5 Advertisement/peer pressure to use alcohol, marijuana, and other drugs
- 8.1.6 Alcohol, marijuana, and other drug use/abuse rules and regulations
  - a. Laws concerning alcohol, marijuana, and other drug abuse
  - b. Zero tolerance rules and regulations
  - c. Penalties associated with alcohol, marijuana, and other drug abuse

### **C 8.2 Student will recognize legal responsibility to not use alcohol, marijuana and other drugs that affect the ability to operate a vehicle safely and develop strategies for alternative means of safe transportation.**

- 8.2.1 Refusal skills
- 8.2.2 Peer intervention skills
- 8.2.3 Community resources/health agencies
- 8.2.4 Parental support

**C 8.3 Student will explain the need for driver fitness to aid managed-risk driver performance and recognize that external and internal vehicle distractions, fatigue, and aggression may result in injury and physical damage crashes.**

- 8.3.1 Driver distractions
  - a. Definitions/types
    - i. Physical
    - ii. Mental
    - iii. Visual
    - iv. Auditory
  - b. Effect on new drivers
  - c. Outside vehicle distractions
  - d. Inside vehicle distractions, including vehicle technology
- 8.3.2 Dividing attention
  - a. Vision needs
  - b. Mental awareness
- 8.3.4 Fatigue and sleep disorders
- 8.3.5 Driver aggression and response
- 8.3.6 Driver motivation

**C 8.4 Student will describe the impact of temporary impairments and long-term disabilities and the strategies to compensate and enhance for managed-risk driver performance.**

- 8.4.1 Temporary impairments (i.e., sprains, fractured bones, acute illness, etc.)
- 8.4.2 Long term disabilities (i.e., paralysis, missing limbs, chronic illness, mental disabilities, etc.)

**C 8.5 Student will identify risk factors affecting other driver's performance and describe low risk responses.**

- 8.5.1 Identify risk factors
- 8.5.2 Low risk responses

## **C 9.0 Classroom Standard Nine: Managing Adverse Conditions**

The student will:

- 9.1. recognize how adverse weather conditions can impact visibility and traction; and respond by adjusting speed to meet the ability to steer and stop within the limits of the conditions.
- 9.2. recognize how adverse weather conditions create visibility and traction problems and the effect on space management skills in regard to speed and position adjustments.
- 9.3. recognize how night driving creates a visibility problem and how this affects space management in regard to speed and position adjustments.

*This standard relates to Standard IC 4.0.*

*The following details explain the content standards listed above.*

**C 9.1 Student will recognize how adverse weather conditions can impact visibility and traction; and respond by adjusting speed to meet the driver's ability to change direction and/or speed within the limits of road conditions.**

- 9.1.1 Identify types of weather conditions



- a. Understand what can go wrong
- b. Prevention techniques
- c. Types of adverse conditions
- d. Vehicle control
- e. Technology concerns (e.g., cruise control, lane keeping assist)
- 9.1.2 visibility conditions
  - a. Understand what can go wrong
  - b. Prevention techniques
  - c. Types of adverse conditions
  - d. Vehicle control
- 9.1.3 traction conditions.
  - a. Understand what can go wrong
  - b. Prevention techniques
  - c. Understeer
  - d. Oversteer
  - e. Vehicle control
- 9.1.4 Traffic flow situations under limited conditions of visibility/traction.
- 9.1.5 Intersection management under limited conditions of visibility/traction.
  - a. Traffic flow to each side of vehicle
  - b. Oncoming traffic gap selection
  - c. Crossing traffic gap selection
- 9.1.6 Multiple-lane choices and usage under limiting conditions
- 9.1.7 Responding to non-motorized highway users

**C 9.2 Student will recognize how adverse weather conditions creates visibility and traction problems and the effect on space management skills in regard to speed and position adjustments.**

- 9.2.1 Control of space around vehicle
- 9.2.2 Dividing attention tasks
- 9.2.3 Appropriate mirror use
- 9.2.4 Maintain separation to sides and rear
- 9.2.5 Communicating presence/intentions
- 9.2.6 Effective management of limited visibility/traction
- 9.2.7 SEE commentary assessment
- 9.2.8 Rules of the Road
  - a. Maintaining visibility laws
  - b. Occupant protection laws
  - c. Use of electronic devices
  - d. Emergency flasher usage
  - e. Headlight usage

**C 9.3 Student will recognize how night driving creates a visibility problem and how this affects space management in regard to speed and position adjustments.**

- 9.3.1 Understand what can go wrong
- 9.3.2 Prevention techniques
- 9.3.3 Vehicle control
- 9.3.4 Technology concerns (e.g., cruise control)

## C 10.0 Classroom Standard Ten: Other Roadway Users

The student will:

- 10.1. describe the characteristics and limitations of other motorized vehicles that may have different weight, speed, and visibility problems and respond with appropriate space management principles.
- 10.2. describe the characteristics and limitations of small, lightweight motorized and non-motorized vehicles and pedestrians that may have different speed and visibility problems and respond with appropriate space management principles.
- 10.3. describe the characteristics and limitations of track-based vehicles (trains and trolleys) that may have different weight, speed, and visibility problems and respond with appropriate space management principles.

*This standard relates to Standard IC 3.0.*

*The following details explain the content standards listed above.*

### **C 10.1 Student will describe the characteristics and limitations of other motorized vehicles that may have different weight, speed, and visibility and respond with appropriate space management principles.**

- 10.1.1 Heavy commercial vehicles
  - a. Vehicles dedicated to commercial use
  - b. Trailer combinations- single, double, triple
  - c. Visibility
  - d. Passing
  - e. Wind blast
  - f. Space needs when turning
  - g. Passenger vehicle interaction
  - h. Hazardous materials vehicle interaction
- 10.1.2 Commercial and non-commercial passenger vehicles
  - a. School bus
  - b. Multi-purpose activity bus
  - c. Transit bus
  - d. Motorcoach
  - e. Shuttle bus
  - f. Autonomous passenger vehicles
- 10.1.3 Vehicle and trailer combination
  - a. Passing issues
  - b. Wind blast issues
  - c. Space needs when turning
  - d. Visibility issues
- 10.1.4 Delivery vans and trucks and large autonomous delivery vehicles on the roadway
- 10.1.5 Motorcycles and mopeds
  - a. Awareness
    - i. Searching for and identifying
    - ii. Awareness of visibility limitations
    - iii. Lane position
    - iv. Space management
    - v. Following distance
    - vi. Humanize motorcycle and moped riders
  - b. Unique characteristics

- i. Profile, size and maneuverability
- ii. Speed

- 10.1.6 Motorcycle and moped limitations
- 10.1.7 Construction vehicles and work zones
- 10.1.8 Emergency vehicles
- 10.1.9 Farm equipment
- 10.1.10 Funeral processions
- 10.1.11 Snowmobiles and ATV units
  - a. Speed issues
  - b. Different travel speeds
  - c. Maintaining momentum on hills
  - d. Acceleration/deceleration

**C 10.2 Student will describe the characteristics and limitations of small, lightweight motorized and non-motorized vehicles and pedestrians that may have different speed, and visibility problems and respond with appropriate space management principles.**

- 10.2.1 Small, lightweight motorized and non-motorized vehicles and pedestrians
  - a. Pedestrians (e.g., visually impaired, disabled, led by service dogs, children)
  - b. Pedal cyclists, bicyclists, and cargo bicyclists (electric and self-propelled)
  - c. Personalized transport (e.g., skates, skateboards, horses, hoverboards, scooters, two-wheeled personal transporter, wheelchairs)
  - d. Horse drawn equipment
  - e. Animals
  - f. Small autonomous delivery vehicles, which ride on the sidewalk or along the roadway
- 10.2.2 Legal right to interact with vehicles
  - a. Sometimes mimic vehicles
  - b. Sometimes mimic pedestrians
- 10.2.3 Driver response
  - b. Space management
  - c. Speed

**C 10.3 Student will describe the characteristics and limitations of tracked vehicles (trains and trolleys) that may have different weight, speed, and visibility problems and respond with appropriate space management principles.**

- 10.3.1 Freight trains
- 10.3.2 High speed passenger trains
- 10.3.3 Electric/cable cars
- 10.3.4 Light rail
- 10.3.5 Trolley cars

## **C 11.0 Classroom Standard Eleven: Responding to Emergencies, Vehicle Malfunctions and Crashes**

The student will:

- 11.1. recognize and respond to vehicle malfunctions in a managed-risk manner, understand vehicle braking and technology systems and utilize proper braking techniques.
- 11.2. understand and relate how the roadway system is managed by police and state agencies to assist with emergencies, crashes and vehicle malfunctions.
- 11.3. recognize the responsibilities for attending to a crash scene situation.

*This standard relates to Standard IC 4.0.*

*The following details explain the content standards listed above.*

### **C 11.1 Student will recognize and respond to vehicle malfunctions in a managed-risk manner, understand vehicle braking and technology systems and utilize proper braking techniques.**

- 11.1.1 Dashboard electronic malfunctions
  - a. Alert lights and symbols
  - b. Warning lights and symbols
- 11.1.2 Engine, fuel, and ignition system malfunctions
- 11.1.3 Lights and signal malfunctions
- 11.1.4 Steering and suspension malfunctions
  - a. Power steering
  - b. Off-road recovery
  - c. Understeer/oversteer recognition and correction
  - d. Intelligent stability and handling systems (ISHS, ESP, ESC)
- 11.1.5 Tires, traction loss recognition and control
  - a. Blowouts
  - b. Understeer/oversteer recognition and correction
  - c. Intelligent stability and handling systems (ISHS, ESP, ESC)
- 11.1.6 Braking system malfunctions
  - a. Antilock braking systems (ABS)
  - b. Understeer/oversteer recognition and correction
  - c. Intelligent stability and handling systems (ISHS, ESP, ESC)
- 11.1.7 Active passive integrated approach (APIA) systems
- 11.1.8 Vehicle load and weight distribution
  - a. Effect on weight transfer
  - b. Forces of impact
  - c. Traction, gravity, inertia, momentum
  - d. Tire condition/air pressure
  - e. ABS (two-wheel/four-wheel)
- 11.1.9 Intelligent stability and handling systems (ISHS, ESP, ESC)

### **C 11.2 Student will explain how the roadway system is managed by police and state agencies to help assist with emergencies, crashes and vehicle malfunctions.**

- 11.2.1 Law enforcement agencies
  - a. State enforcement agencies

- b. County enforcement agencies
  - c. Local enforcement agencies
- 11.2.2 Emergency response agencies
  - a. Getting help
  - b. Types of emergency response
- 11.2.3 Rules of Road
  - a. Financial responsibility
  - b. Move over law

**C 11.3 Student will recognize the responsibilities for attending to a crash scene.**

- 11.3.1 Responsibilities at a crash scene
- 11.3.2 Getting help
- 11.3.3 Reporting crashes

**C 12.0 Classroom Standard Twelve: Understanding Advanced Driver-Assistance Systems (ADAS) Safety Features**

The student will:

- 12.1 describe advanced driver-assistance systems (ADAS).
- 12.2 identify safety features within the categories of advanced driver-assistance systems.
- 12.3 know how to use safety features safely and effectively.
- 12.4 identify the performance abilities and limitations of current safety features.

*The following details explain the content standards listed above.*

**C 12.1 Student will describe ADAS, including the benefits and concerns.**

- 12.1.1 ADAS
  - a. What it is
    - i. Systems using a variety of sensors, software technology and safety features working together to reduce crashes are known
  - b. What it does
    - i. Employ on-board sensors and software technology that sense and monitor conditions inside and outside the vehicle to identify potential risk situations.
  - c. Who is responsible?
    - i. The driver is completely responsible for the safe and effective use of ADAS
    - ii. If a crash occurs or the safety feature is used improperly the driver is legally responsible and not the manufacturer.
- 12.1.2 Potential benefits
  - a. Reduction of crashes, injuries, and fatalities.
  - b. Reduction of human error.
  - c. Improved warning/reaction/response times.
  - d. Reduced driver fatigue and distractions by sensing or warning the driver (only certain technologies).
  - e. Smoother traffic flow.
  - f. More efficient transportation, leading to lower fuel/energy use and fewer harmful emissions/smaller carbon footprint.

12.1.3 Potential concerns

- a. Drivers changing their behavior based on technologies.
- b. Perceived performance misconceptions and expectations (e.g., driving faster, following more closely, braking later, cornering more aggressively).
- c. Unfamiliar with how to use vehicle safety technologies.
- d. Eliminate the potential benefit by turning off vehicle safety technologies.
- e. The driver may initially be overwhelmed by warnings, alerts and information.
- f. Become complacent and therefore ignore or disregard a warning.

**C 12.2 Student will identify the categories of ADAS and their respective safety features. Note: Refer to Appendix A ADAS Safety Features for a full list of safety features and those that are the most important to cover. Refer to [\*Clearing the Confusion: Common Naming for Advanced Driver Assistance Systems\*](#) for a list of categories and examples. The categories include:**

- 12.2.1 Warnings
- 12.2.2 Intervention
- 12.2.3 Assistance
- 12.2.4 Parking assistance
- 12.2.5 Other driver assistance features

**C 12.3 Student will describe how to use advanced driver assistance system (ADAS) safety features safely and effectively.**

- 12.3.1 Read the vehicle owner's manual and know the safety features for every vehicle owned and driven.
- 12.3.2 Know how the safety features function before driving.
- 12.3.3 Remain engaged in the driving task, the driver may become distracted or inattentive and pay less attention.
- 12.3.4 Keep safety features on unless environmental conditions warrant turning them off (e.g., advanced cruise control during adverse weather).
- 12.3.5 Keep sensors and software technology clean and in working condition.
- 12.3.6 Stay up to date on vehicle safety features because of ongoing testing and improvements.

**C 12.4 Student will identify the limitations of current advanced driver-assistance system (ADAS) safety features.**

- 12.4.1 Limitations due to environmental factors or roadway conditions (e.g., nighttime, line of sight, turns, curves, adverse weather, dirty sensors, pavement markings).
- 12.4.2 Limitations inherent in the safety features (e.g., sensor performance, design, intended purpose).

## **C 13.0 Classroom Standard Thirteen: Making Informed Consumer Choices**

The student will:

- 13.1 perform map reading and trip planning exercises using current and emerging technology that lead to an in-car family trip activity.
- 13.2 recognize problems consumers confront when making wise choices in purchasing insurance or an automobile.
- 13.3 describe future operator responsibilities in regard to licensing.
- 13.4 identify operator responsibilities in regard to traffic stops.
- 13.5 identify techniques for safely towing a trailer.
- 13.6 describe the impact vehicles have on the environment and develop strategies to reduce the carbon footprint.

*The following details explain the content standards listed above.*

### **C 13.1 Student will perform map reading and trip planning exercises using current and emerging technology that leads to an in-car family trip activity.**

- 13.1.1 Map reading
  - a. Paper formats (e.g., foldable, atlas)
  - b. Digital and GPS formats
  - c. Online map formats
- 13.1.2 Destination driving exercise
  - a. Plan an in-car family trip driving route

### **C 13.2 Student will recognize problems consumers confront when making informed choices in purchasing insurance or an automobile.**

- 13.2.1 Insurance
  - a. Types
  - b. Needs
  - c. Safety and financial responsibility (see state law)
- 13.2.2 Purchasing vehicles
  - a. New vehicle costs
  - b. Used vehicle costs
  - c. Vehicle selection

### **C 13.3 Student will describe operator responsibilities in regard to licensing and registration.**

- 13.3.1 Licensing/registration laws
  - a. Driver
  - b. Vehicle

### **C 13.4 Student will identify operator and passenger responsibilities in regard to traffic stops.**

- 13.4.1 Operator responsibilities
- 13.4.2 Passenger responsibilities

**C 13.5 Student will identify techniques for safely towing a trailer.**

13.5.1 Towing a trailer

- a. Skills required for safely towing a trailer
- b. Techniques required to back a trailer successfully
- c. Basic equipment needed
- d. Connecting a trailer to a vehicle
- e. Loading a trailer

**C 13.6 Student will describe the impact vehicles have on the environment and develop strategies to reduce the carbon footprint.**

13.6.1 Fuel-efficient vehicles

13.6.2 Fuel-saving driving habits

- a. Keep track of your gas mileage
- b. Control your speed
- c. Warm the engine
- d. Lighten the load
- e. Reduce idling
- f. Reduce drag

13.6.3 Alternative fuels

13.6.4 Recycling

- a. Motor oil
- b. Used cars and parts
- c. Batteries
- d. Tires

**C 13.7 Student will understand the impact aftermarket/ retrofitted auto parts have on the vehicle.**

13.7.1 Safety and crashworthiness

13.7.2 Reliability

13.7.3 Comfort

13.7.4 Control and responsiveness to driver input

13.7.5 Traction

13.7.6 Visibility - both negative and positive (e.g., adding supplemental mirrors or upgraded headlight bulbs)

13.7.7 Effects on warranties



## Essential Knowledge and Skills for Driver and Traffic Safety Education

### Driver and Traffic Safety Education: In-car Skills

- (E) **General Requirements.** Driver education in-car instruction is generally a required prerequisite to qualify for a driver permit between 14 years 6 months and before age 18 dependent on state licensing requirements.
- (F) **Introduction.** State regulated driver and traffic safety education provides the foundation for students, assisted by parents/mentors, to begin the lifelong learning process of managed risk driving practices. Students acquire essential knowledge, skills, and experiences to perform managed risk driving in varying traffic environments. Satisfactory completion of the driver and traffic safety education course qualifies the student to continue the graduated driver licensing process.
- (G) **Responsibilities.** Teachers assist and guide students to meet or exceed minimum competency standards through in-car instruction that includes modeling, knowledge assessment, skill assessment, guided observation, and parental involvement. Concurrent and integrated operation of classroom and in-car instruction is required for student knowledge and skill development.

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### (H) In-car knowledge and skills standards.

#### IC 1.0 In-car Standard One: Preparing to Operate a Vehicle

- 1.1 Preparations to Operate Vehicle.** The student will recognize the visible space around the vehicle, the necessity of making routine vehicle checks and adjustments prior to and after entering the vehicle, identifies the location of alert and warning symbol lights, identifies, and understands advanced driver-assistance system safety features, understands the operation of vehicle control and safety devices, and is aware of vehicle weight concepts when braking, accelerating, and steering.
- 1.2 Judgment of Vehicle to Roadway Position.** The student will recognize and analyze the standard and personal vehicle guides or reference points relationship to roadway position and vehicle placement.

*This standard relates to Standard C 1.0 and C 2.0.*

*The following details explain the content standards listed above.*

**IC 1.1 Preparations to Operate Vehicle.** The student will recognize the visible space around the vehicle, the necessity of making routine vehicle checks and adjustments prior to and after entering the vehicle, identifies the location of alert and warning symbol lights, understands the operation of vehicle control and safety devices, and is aware of vehicle weight concepts when braking, accelerating, and steering.

**1.1.1 Vehicle Operating Space.** The student will:

- Identify the visual limitation to the front of the vehicle;
- Identify the visual limitation to the rear of the vehicle;
- Identify the visual limitation to the right side of the vehicle;
- Identify the visual limitation to the left side of the vehicle;
- Measure the length and width of the vehicle;
- Draw and measure the size of the vehicle tire patches;
- Demonstrate the limited visual view in the rear-view mirror;
- Demonstrate the traditional mirror view settings for the rear and side view mirrors; and

- i. Demonstrate and apply the enhanced mirror settings for the rear and side view mirrors.
- 1.1.2 Getting Ready to Drive.** The student will:
  - a. Prepare physically and mentally to use vehicle;
  - b. Approach the vehicle with awareness;
  - c. Check outside and inside of vehicle before opening the door;
  - d. Lock doors;
  - e. Adjust head restraints, seat position, mirrors, safety restraints, steering wheel position;
  - f. Check all occupants for safety belt use; and
  - g. Be able to demonstrate effective meaning and usage of all gauges.
- 1.1.3 Starting the Vehicle.** The student will:
  - a. Place or check that parking brake is in set position, as required by state statute and owner's manual;
  - b. Select proper gear for starting;
  - c. Secure brake;
  - d. Recognize alert lights for safety accessories;
  - e. Demonstrate proper use of ignition starting device;
  - f. Demonstrate ability to select and use appropriate accessories;
  - g. Give an example of a warning light for engine or system accessories;
  - h. Make appropriate gear selection for movement; and
  - i. Put headlights on - day and night.
- 1.1.4 Placing Vehicle in Motion.** The student will:
  - a. Visually identify open space to enter before moving from brake to accelerator;
  - b. Communicate to other users;
  - c. Place the vehicle into motion smoothly; and
  - d. Recognize that too much acceleration affects vehicle body pitch toward the rear.
- 1.1.5 Stopping Vehicle in Motion.** The student will:
  - a. Search effectively ahead of the vehicle to determine braking needs;
  - b. Use controlled braking efficiently with heel of foot on floorboard;
  - c. Check rear zone/space prior to braking;
  - d. Apply a firm squeezing braking force at the beginning of the braking process;
  - e. Bring the vehicle to a smooth stop by squeezing off brake;
  - f. Recognize that too much braking action affects vehicle body pitch toward the front;
  - g. Ease pressure off brake during last two seconds of braking to ease pitch of vehicle;
  - h. Check the rear zone/space before, during and after braking actions; and
  - i. Demonstrate effective use of maximum ABS braking.
- 1.1.6 Steering.** The student will:
  - a. Turn head and visually target in the direction of intended path of travel prior to turning;
  - b. Use a target, sightline and path of travel to determine steering entry and return;
  - c. Use a balanced hand position on the wheel (9-3 or 8-4);
  - d. Recognize that too much speed and steering affects vehicle body roll toward the opposite side of vehicle;
  - e. Use the hand-over-hand or hand-to-hand (turning), hand-to-hand (curvatures), one hand (reverse), or evasive action (avoidance) methods effectively; and
  - f. Visually check the rear-view mirror, side view mirrors and mirror blind-zone areas.

**1.1.7 Securing the Vehicle.** The student will:

- a. Stop the vehicle in a safe and legal position;
- b. Set the parking brake as required by state statute and owner's manual;
- c. Shift into appropriate gear before releasing brake;
- d. Turn off appropriate accessories prior to turning off the vehicle;
- e. Visually check traffic flow before opening door; and
- f. Lock doors and/or secure any alarm system.

**IC 1.2. Judgment of Vehicle to Roadway Position.** The student recognizes and analyzes the standard and personal vehicle guides or reference points relationship to roadway position and vehicle placement.

**1.2.1 Right Side of Vehicle.** The student will:

- a. Determine when the vehicle is positioned within 3-6 inches of the curb or a lane line;
- b. Determine when the vehicle is positioned within 2-3 feet of the curb or a lane line; and
- c. Determine when the vehicle is positioned within 5-8 feet of the curb or a lane line.

**1.2.2 Left Side of Vehicle.** The student will:

- a. Determine when the vehicle is positioned within 3-6 inches of the curb or a lane line;
- b. Determine when the vehicle is positioned within 2-3 feet of the curb or a lane line; and
- c. Determine when the vehicle is positioned within 5-8 feet of the curb or a lane line.

**1.2.3 Front of Vehicle.** The student will:

- a. Determine when the front bumper is positioned even with the stop line or curb line.

**1.2.4 Rear of Vehicle.** The student will:

- a. Determine when the rear bumper is positioned even with a line.

**1.2.5 Front Turning Point of Vehicle.** The student will:

- a. Determine where on the road the front is positioned for turning left; and
- b. Determine where on the road the front is positioned for turning right.

**1.2.6 Rear Turning Point of Vehicle.** The student will:

- a. Determine where on the road the rear is positioned for backing left; and
- b. Determine where on the road the rear is positioned for backing right.

**1.2.7 Application of Principles.** The student will:

- a. Demonstrate vehicle placement within typical lane positions; and
- b. Demonstrate vehicle placement within the lane when backing and turning.

## IC 2.0 In-car Standard Two: Introducing Traffic Entry and Intersection Approach Skills

The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments. Topics include:

### 2.1 Visualization of Intended Travel Path

#### 2.2. Searching Intended Travel Path

*This standard relates to Standard C 3.0 and C 4.0.*

*The following details explain the content standards listed above.*

**IC. 2.1. Visualization of Intended Travel Path.** The student utilizes critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments.

#### 2.1.1 Target. The student will:

- a. Identify a stationary object or area that appears in the center and at the end of your intended path of travel.

#### 2.1.2 Target Area. The student will:

- a. Locate the target area and evaluate the line of sight or path of travel conditions
- b. Identify the traffic problems and elements in and near the target area; and determine best approach speed and lane position.

#### 2.1.3 Targeting Path. The student will:

- a. Evaluate the target area, while developing an image of the intended targeting path;
- b. Identify elements that can change or modify the intended travel path; and
- c. Determine risks associated with maintaining the intended path of travel.

**IC. 2.2 Searching Intended Travel Path.** The student utilizes critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments.

#### 2.2.1 Divide Focal and Mental Attention Between Intended Target, Travel Path, and Other Tasks. The student will:

- a. Move focal vision from target area to another location and back to target area;
- b. Move focal vision within ½ second time frames; and
- c. Use active searching to allow the brain to perceive information.

#### 2.2.2 Target Area to Searching Areas. The student will:

- a. Search to the target area to evaluate its conditions and determine entry speed and position
- b. Search for line of sight or path of travel changes affecting the approach to the target area
- c. Approach the target area, while continually re-evaluating risks in the immediate 4-8 second travel path
- d. As you approach the target area, search for your new target area and new travel path

**2.2.3 Know How to Judge Space in Seconds.** The student will:

- a. Search 20-30 seconds ahead to identify potential problems;
- b. Visualize the space the vehicle will occupy at least 12-15 seconds ahead;
- c. Search 8-12 seconds ahead to identify an alternate path of travel;
- d. Continually evaluate the 4-8 second immediate path; and
- e. Make speed and/or lane position adjustments when the search areas cannot be maintained

**2.2.4 Detect Changes to Line of Sight or Path of Travel.** The student will:

- a. Evaluate modification in the ability to see or maintain a travel path; and
- b. Recognize a line of sight or path of travel change, then evaluate other zones/spaces for speed and lane adjustments

**2.2.5 Identify Open, Closed or Changing Zones/Spaces.** The student will:

- a. Identify the intended travel path for open, closed or changing conditions; and
- b. Evaluate open, closed or changing conditions for speed and position adjustments.

**2.2.6 Searching Intersections.** The student will:

- a. Search for open zones/space to the left, front and right, when approaching an intersection (every intersection is a zone change);
- b. Evaluate closed or changing zones/spaces and make necessary speed and/or lane position adjustments, when approaching an intersection; and
- c. Search for open zones/spaces to the left, front and right, before entering an intersection.

**2.2.7 Searching Into Curves and Over Hill Crest.** The student will:

- a. Search the line of sight and path of travel through the curve or over the hill crest for possible closed or changing status of your path of travel, when the target area is a curve or a hill crest; and
- b. Evaluate the line of sight, path of travel for appropriate speed and position adjustments, before entering a curve or a hill crest.

## **IC 3.0 In-car Standard Three: Developing Visual and Mental Perception for Vehicle Control Tasks**

The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk, low risk, moderate risk, and complex risk environments including basic vehicle control, space management, and apply the state vehicle law and rules of the road.

Topics include:

- 3.1 Speed Control**
- 3.2 Lane Position Selection**
- 3.3 Rear Zone Searching and Control**
- 3.4 Following Time and Space**
- 3.5 Communication and Courtesy**
- 3.6 Using Three Steps to Problem-Solving (i.e., SEE)**
- 3.7 Use a Practice Commentary**

*This standard relates to Standard C 5.0, C 6.0, C 7.0 and C 10.0.*

*The following details explain the content standards listed above.*

### **IC. 3.1 Speed Control.**

#### **3.1.1 Divide Focal and Mental Attention Between Intended Target, Travel Path, and Other Tasks.** The student will:

- a. Move focal vision from target area to another location and back to target area;
- b. Move focal vision within ½ second time frames;
- c. Use active searching to allow brain to perceive information.

#### **3.1.2 Selection for Ongoing Conditions.** The student will:

- a. Select travel speeds based upon driver, vehicle, legal, roadway, and environmental limitations;
- b. Make speed adjustments based on driver processing information, and limitations.

#### **3.1.3 After Seeing Changes in Line of Sight or Path of Travel.** The student will:

- a. Recognize a closed zone/space (a red light or stopped traffic), adjust speed to arrive as the zone/space opens;
- b. Avoid using acceleration into a closed or changing zone/space;
- c. Adjust speed to maintain or establish an open zone/space when your ability to see a line of sight or path of travel is reduced.

#### **3.1.4 After Seeing a Speed Limit Sign.** The student will:

- a. Check speedometer, mirrors, and evaluate line of sight or path of travel conditions; and
- b. Adjust speed to meet driver, vehicle, legal, roadway, and environmental limitations.

#### **3.1.5 Speed Control While Approaching Curves and Hills.** The student will:

- a. Establish appropriate speed on approach;
- b. Establish appropriate speed on apex; and
- c. Establish appropriate speed on exit.

### **IC. 3.2 Lane Position Selection.**

#### **3.2.1 Divide Focal and Mental Attention Between Intended Target, Travel Path and Other Tasks.** The student will:

- a. Move focal vision from target area to another location and back to the target area;
- b. Move focal vision within ½ second time frames; and
- c. Use active searching to allow brain to perceive information.

- 3.2.2 Lane Position.** The student will:
  - a. Select the appropriate lane for space management, legal requirements, and destination.
- 3.2.3 Lane position usage while driving straight ahead.** The student will:
  - a. Select a lane position to give best separation from closed or changing zones/space; and
  - b. Demonstrate ability to place vehicle in appropriate lane position.
- 3.2.4 Lane position usage while parking.** The student will:
  - a. Select a lane position to give best separation from closed or changing zones/space; and
  - b. Demonstrate ability to place vehicle in appropriate lane position.
- 3.2.5 Lane position usage while turning around.** The student will:
  - a. Select a lane position to give best separation from closed or changing zones/space; and
  - b. Demonstrate ability to place vehicle in appropriate lane position.
- 3.2.6 Lane position usage while approaching curves and hill crests.** The student will:
  - a. Establish the appropriate lane position on approach;
  - b. Establish the appropriate lane position in apex of a curve; and
  - c. Establish the appropriate lane position on exiting.

### **IC. 3.3 Rear Zone Searching and Control.**

- 3.3.1 Divide Focal and Mental Attention Between Intended Target, Travel Path and Other Tasks.** The student will:
  - a. Move focal vision from target area to another location and back to target area;
  - b. Move focal vision within ½ second time frames; and
  - c. Use active searching to allow brain to perceive information.
- 3.3.2 Inside Rearview Mirror Usage.** The student will:
  - a. Search to the rear after seeing a change to your line of sight or path of travel;
  - b. Search to the rear before and after making a turn or a stop;
  - c. Search to the rear before and after making speed adjustment;
  - d. Search to the rear before and after making lane position adjustment; and
  - e. Search to the rear before and after making a lane change.
- 3.3.3 Outside Side View Mirrors and Mirror Blind Zone Checks.** The student will:
  - a. Check the side view mirror before adjusting a lane position in that direction;
  - b. Visually check mirror blind zone after side view mirror use, before moving the steering wheel.
  - c. Check the side view mirror before adjusting a lane position in that direction.
- 3.3.4 Evaluate Condition to the Rear.** The student will:
  - a. Determine if the rear zone/space is an open, closed, or changing condition; and
  - b. Determine the appropriate speed or lane adjustment needed when a tailgater is closing or changing the rear zone/space.

### **IC. 3.4 Following Time and Space.**

- 3.4.1 Divide Focal and Mental Attention Between Intended Target, Travel Path and Other Tasks.** The student will:
  - a. Move focal vision from target area to another location and back to target area;
  - b. Move focal vision within ½ second time frames; and
  - c. Use active searching to allow brain to perceive information.
- 3.4.2 Closure Rate on Approach.** The student will:
  - a. Approach the vehicle in front gradually, avoiding a fast closure rate.
- 3.4.3 Moving at Same Speed - Maintaining Four Second Interval.** The student will:
  - a. Work to maintain four seconds of time and space when following another vehicle,

b. Adjust speed or lane position if four seconds of time is difficult to maintain.

**3.4.4 When Stopping Behind Vehicles.** The student will:

- a. When stopped behind a vehicle, be able to see the rear tires touching the pavement ahead
- b. When stopped behind a vehicle without visibility to the rear, be able to see the driver ahead in their side view mirror (no-zone).

**3.4.5 Delay Start Before Moving.** The student will:

- a. Delay forward movement for two seconds to open the front zone/space after the vehicle in front begins to move.

**IC. 3.5 Communication and Courtesy.**

**3.5.1 Technique.** The student will:

- a. Use turn signal before turning right or left;
- b. Use lane change device rather than turn signal appropriate for moving to another lateral position;
- c. Use headlights on at all times to increase visibility;
- d. Use horn to make others aware of your presence;
- e. Tap brake lights to warn rear traffic of a slowdown or stop in the traffic flow; and
- f. Use vehicle speed and position could communicate the driver's intention.

**3.5.2 Timing.** The student will:

- a. Put turn signal on at least five seconds prior to moving since communication requires time to be sent, received and acted upon (see state law)
- b. Communicate early so that your safe path of travel can best be controlled.

**3.5.3 Commitment.** The student will:

- a. Make sure messages are acknowledged by others.

**IC. 3.6 Using Three Steps to Problem-Solving (i.e., SEE).**

**3.6.1 Search for a change to your line of sight and/or to your path of travel.** The student will:

- a. Search for restrictions to your intended path of travel

**3.6.2 Evaluate your other zones/spaces for risk.** The student will:

- a. Search related zones;
- b. Look for alternate path of travel; and
- c. Evaluate all information before executing.

**3.6.3 Execute an Adjustment.** The student will:

- a. Select and apply the best
  - i. Speed control;
  - ii. Lane position; and
  - iii. Communication for the conditions.

**IC. 3.7 Use a Practice Commentary.** The student will:

3.7.1 State the zone condition, look for line of sight or path of travel zone/space changes;

3.7.2 State the actions you will take in terms of speed, lane position and communication;

3.7.3 Develop the process for brief periods of time as a rear seat occupant/observer; and

3.7.4 Repeat the process for brief periods of time for the driver.



## IC 4.0 In-car Standard Four: Responding to Emergency Situations

### **4.1 Divide Focal and Mental Attention Between Intended Target, Travel Path, and Other Tasks.**

The student will utilize critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments.

### **4.2 Identify, Assess and Respond to Vehicle Emergencies.** The student will describe appropriate ways to prevent having a vehicle emergency and identify, assess, and respond to vehicle emergencies, including engine failure, brake failure and tire pressure failure.

### **4.3 Identify, Assess and Respond to Environmental Conditions.** The student will describe appropriate ways to prevent having an environmental emergency and identify, assess, and respond to environmental conditions, including traction loss, vehicle tires dropping off the pavement, line of sight loss situations and loss of path travel situations.

*This standard relates to Standard C 9.0 and C 11.0.*

*The following details explain the content standards listed above.*

### **IC. 4.1 Divide Focal and Mental Attention Between Intended Target, Travel Path, and Other Tasks.**

The student utilizes critical thinking, decision-making, and problem-solving skills to operate the vehicle and perform basic maneuvers in controlled risk environments. The student will:

- a. Move focal vision from target area to another location and back to target area;
- b. Move focal vision within ½ second time frames; and
- c. Use active searching to allow brain to perceive information.

### **IC. 4.2 Identify and respond to vehicles emergencies.** The student will:

- a. Describe appropriate ways to prevent having a vehicle emergency.
- b. Identify, assess, and respond to engine failure.
- c. Identify, assess, and respond to brake failure.
- d. Identify, assess, and respond to tire failure.

### **IC. 4.3 Identify and respond to environmental conditions.** The student will:

- a. Describe appropriate ways to prevent having an environmental emergency.
- b. Identify, assess, and respond to traction loss.
- c. Identify, assess, and respond to vehicle tires dropping off the pavement.
- d. Identify, assess, and respond to loss of line-of-sight situations.
- e. Identify, assess, and respond to loss of path of travel situations.

## IC 5.0 In-car Standard Five: Assessment of Driver Performance

- 5.1. Driver Assessment.** The student enrolled in a certified driver education program will be able to successfully demonstrate the key core behavioral patterns while performing the recommended procedures on a designated assessment route.
- 5.2. Assessment of Vehicle Safety Technology.** The student enrolled in a certified driver education program will be able to properly use and understand available vehicle safety technology.

*This standard relates to Standard C 1.0 – C 7.0 and C 9.0 – C 11.0. – 12.0*

*The following details explain the content standards listed above.*

- IC. 5.1** The student enrolled in a certified driver education program will be able to successfully demonstrate the key core behavioral patterns while performing the following procedures.
- 5.1.1 Divide Focal and Mental Attention Between Intended Target, Travel Path and Other Tasks.** The student will:
- Move focal vision from target area to another location and back to target area;
  - Move focal vision within ½ second time frames; and
  - Use active searching to allow brain to perceive information.
- 5.1.2 Precision Turns.** The student will:
- Demonstrate and explain a proper side position;
  - Demonstrate and explain the forward position;
  - Search intersections left, front, and right to ascertain open zones/spaces; and
  - Look into the turn before turning the steering wheel.
- 5.1.3 Approach to Intersections.** The student will:
- See and respond to open/closed zones;
  - Check and respond to rear zone conditions;
  - Establish and maintain proper lane usage and speed control;
  - Search left, front, and right zones for changes, get open zones before entering; and
  - Demonstrate and use legal, safety stop, and staggered when applicable.
- 5.1.4 Timing Arrival for Open Zone.** The student will:
- See condition of traffic light; adjust speed to arrive at a green light;
  - See closed front zone; adjust speed to reduce closure rate and to arrive in an open zone; and
  - Adjust speed to have at least one open side zone.
- 5.1.5 Precision Lane Change.** The student will:
- Evaluate zones and mirror blind spots;
  - Move to lane position 2, the left side of lane for left lane change;
  - Move to lane position 3, the right side of lane for right lane change;
  - Make final mirror check and final blind spot check;
  - Enter new lane in lane position 2 or lane position 3;
  - Decide on best lane position for conditions; and
  - Evaluate rear zones
- 5.1.6 Approach to Hill Crest and Curves.** The student will:
- See hill or curve in target area;
  - Check all zones for options;
  - Establish effective speed control;

- d. Best lane position for approaching the hill crest
- e. Select best lane position for left curve approach, lane position 3 if right zone is open, apex lane position 1, exit lane position 1; and
- f. Select best lane position for right curve approach, lane position 2 if left zone is open, apex lane position 3, exit lane position 1.

**5.1.7 Passing/Being Passed.** The student will:

- a. Identify tailgater problems for speed and lane position adjustments;
- b. Evaluate gain versus risk prior to attempting passing maneuver;
- c. Check all zones for conditions; and
- d. Control speed and lane position.

**5.1.8 Getting On/Off Limited Access Highways.** The student will:

- a. Adjusting speed on entrance ramp for maximum searching time and options;
- b. Evaluate gap to enter;
- c. Effective speed on acceleration lane; and
- d. Getting off: plan ahead, test brakes.

**5.1.9 Backing Techniques.** The student will:

- a. Effective searching prior to and while backing;
- b. Effective use of brake for speed control; and
- c. Effective steering technique.

**5.1.10 Parking Techniques.** The student will:

- a. Establish side position;
- b. Demonstrate proper forward position;
- c. Use minimum space to go forward;
- d. Evaluate alignment to space;
- e. Back to pivot point, turn wheel;
- f. Visually target center of vehicle or space to the rear; and
- g. Straighten tires, demonstrate rear limitation reference.

**5.1.11 Turnabout Techniques.** The student will:

- a. Establish side position;
- b. Demonstrate proper forward position;
- c. Use minimum space to go forward;
- d. Evaluate alignment to space;
- e. Back to pivot point, turn wheel;
- f. Visually target center of vehicle or space to the rear; and
- g. Straighten tires, demonstrate rear limitation reference.

**5.1.12 Responding to Emergency Situations.** The student will:

- a. Use vision control, motion control, and steering control sequences;
- b. Recognize and respond to adverse conditions that change vehicle traction;
- c. Recognize front wheel traction loss;
- d. Recognize rear wheel traction loss;
- e. Demonstrate appropriate controlled brake, trail brake, threshold brake, and antilock brake use; and
- f. Recognize and respond to vehicle mechanical failures.

**IC. 5.2** The student enrolled in a certified driver education program will be able to properly use and understand available vehicle safety technology.

## Segment II

### Classroom and In-Car

This material represents the best practices developed by the ADTSEA Curriculum Standards Committee. These standards will be reflected in future curriculum materials supported, sponsored and approved by this professional organization representing traffic safety instructors across North America.

The role of the driver educator is not limited to pre-licensing efforts in the public and private sector. This role will need to be expanded to provide services for lifetime learning components. ADTSEA will play a role in helping to identify the specific needs to accomplish the task of preparing a novice driver within the recommended graduated licensing guidelines.

### **Classroom Performances Concurrent with Segment I**

#### **Goals**

A novice driver is a person who is able to:

- Demonstrate a working knowledge of rules, regulations and procedures of operating an automobile;
- Use visual search skills to obtain correct information and make reduced-risk decisions for effective speed and position adjustments;
- Interact with other users within the Highway Transportation System by adjusting speed, space, and communications to avoid conflicts and reduce risk;
- Demonstrate balanced vehicle movement through steering, braking, and accelerating in a precise and timely manner throughout a variety of adverse conditions;
- Recognize vehicle technology systems and explain the benefits of vehicle warning and assistance systems.
- Confirm the need to protect oneself and others through using active and passive vehicle occupant protection systems;
- Display knowledge of responsible actions in regard to physical and psychological conditions affecting driver performance; and
- Extend supervised practice with licensed parent or guardian to develop precision in the use of skills, processes, habits and responsibilities.

Skill evaluation for each driver should indicate progression for:

- Positioning a vehicle:
  - ✓ Based on visual referencing skills, dividing attention, space management,
- Procedures and sequencing for vehicle operational skill:
  - ✓ Based on pre-drive checks, driver readiness procedures, vehicle control skills, vehicle maneuvering, vehicle position and/or speed selection, and vehicle weight.
- Processing traffic and vehicle information into appropriate speed and position selection:
  - ✓ Based on visual search skills, dividing attention, and space management as measured by vehicle speed, roadway position, driver commentary, and appropriate communication.
- Precision movements for maintaining vehicle control and balance in expected and unexpected situations:
  - ✓ Based on vehicle speed control, dividing attention, vehicle balance, collision avoidance, response to mechanical failures, and traction loss prevention, detection, and control.
- Extend supervised practice with licensed parent or guardian:
  - ✓ Based on delivery of parent guide and completion of Program Skills Log.

## Overview of Novice Driver Preparation Segment II Classroom Standards

**While participating in the state approved driver education 8-hour Segment II classroom program comprised of not less than 8 sessions of 60-minute training segments, the participating student should:**

- C.II. 1.0. Mental and Risk Perceptual Awareness.** The student:
- develops an understanding of the effects of negative reinforcement on driving behavior,
  - recognizes the role of driver fitness, mental preparedness, and the effects of alcohol and other drugs, and
  - develops essential knowledge and skills for reduced-risk performances in preventing and avoiding collision threats.
- C.II. 2.0. Driver Fitness Tasks.** The student recognizes the role of driver fitness, mental preparedness, and the effects of alcohol, marijuana, and other drugs on reduced-risk driver performances.
- C.II. 3.0. Avoiding Collision Threats.** The student develops essential knowledge and skills for reduced-risk performances in preventing and avoiding collision threats.

The student is expected to relate to effects of momentum, gravity, and inertia in personal driving situations, list and identify the purpose of vehicle safety technology for reducing the collision effects of driver error and relate the concepts of vehicle understeer and vehicle oversteer to traction loss.

## Overview of Novice Driver Preparation Segment II In-car Standards

While participating in the state approved driver education two-hour segment II in-car training program comprised of not less than 4 sessions of 30-minute training segments, the participating student should demonstrate proficiency of the personal driving system and strategies in 4 planned assessment routes.

- IC.II. 1.0.    Commentary Driving Assessment.** The student is expected to use a driving system to search for changes to path of travel and line of sight, identify high risk situations, evaluate methods to reduce driver risk in identified situations, evaluate divided attention tasks needed, explain consequences associated driver behaviors and collision factors, and execute appropriate speed and position adjustments accompanied by appropriate communication
- IC.II. 2.0    SEE System Training.** The student is expected to use a driving system to search for changes to path of travel and line of sight, identify high risk situations, evaluate methods to reduce driver risk in identified situations, evaluate divided attention tasks needed, explain consequences associated driver behaviors and collision factors, and execute appropriate speed and position adjustments accompanied by appropriate communication.
- IC.II. 3.0    Commentary Space Management Assessment.** The student is expected to use a driving system to identify restrictions to the path of travel, identify restrictions to the line of sight, and execute appropriate speed and position adjustments, while checking space to the rear.
- IC.II. 4.0    Advanced Collision Avoidance Actions (Off-Road Application).** The student is expected to identify steering actions used to avoid collisions and minimize impact, identify speed control techniques used to avoid collisions and minimize impact, and identify driver strategies related to using vehicle safety technologies effectively.

The student is expected to relate to effects of momentum, gravity, and inertia in personal driving situations, list and identify the purpose of vehicle safety technology for reducing the collision effects of driver error and relate the concepts of vehicle understeer and vehicle oversteer to traction loss.





## Essential Knowledge and Skills for Driver and Traffic Safety Education

### Driver and Traffic Safety Education: Classroom and In-Car Segment II

**General Requirements.** This course is a required prerequisite to obtain a Selected State Driver License at ages between 16 years and before age 18.

**Introduction.** Selected state driver and traffic safety education provides the foundation for students, assisted by parents/mentors, to continue the lifelong learning process of reduced risk driving practices, keeping mentally and physically fit, while acquiring essential knowledge, skills, and experiences to understand and perform reduced risk driving in varying traffic environments.

**Responsibilities.** Teachers will help students meet or exceed minimum competency standards through a combination of classroom and in-car instruction that includes modeling, knowledge assessment, skill assessment, guided observation, and support continued parental involvement.

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#### Classroom Segment II knowledge and skills standards.

### Segment II - C 1.0 Classroom Standard One: Mental and Perceptual

The student understands of the effects of negative reinforcement on driving behavior. The student recognizes the role of driver fitness, mental preparedness, and the effects of alcohol, marijuana, and other drugs. The student develops essential knowledge and skills for reduced-risk performances in preventing and avoiding collision threats. NOTE: Subsequent to successful enrollment in the local driver and traffic safety education course, the student is eligible to start the unrestricted licensing portion of the graduated driver licensing process.

#### C.II. 1.0. Mental and Perceptual Awareness

1.1 Dealing with Negative Reinforcement: The student is expected to:

- ✓ identify the effects of media on driver risk-taking.
- ✓ relate how peers have affected their driver performance.
- ✓ identify other driver behaviors that reinforce poor driving performances.

1.2 Developing Risk Awareness: The student is expected to:

- ✓ identify high risk situations.
- ✓ identify methods to reduce driver risk in identified situations.
- ✓ identify consequences associated driver behaviors and collision factors.

1.3 Making Effective Decisions: The student is expected to:

- ✓ identify driver errors contributing to collisions.
- ✓ identify consequences associated high-risk driver behavior and vehicle operation.
- ✓ identify driver actions to reduce severity of or avoid a collision.

- 1.4 Using a Space Management System: The student is expected to:
- ✓ identify three steps of the space management system employed.
  - ✓ relate how searching skills are developed for reduced-risk performance.
  - ✓ relate how evaluation skills are developed for reduced-risk performance.
  - ✓ explain how to execute speed and position adjustments with effective communication.
  - ✓ develop a plan to work with No-zone concepts.

## Segment II - C 2.0 Classroom Standard Two: Driver Fitness Tasks

The student recognizes the role of driver fitness, mental preparedness, and the effects of alcohol, marijuana, and other drugs on reduced-risk driver performances.

### C.II. 2.0. Driver Fitness Tasks

- 2.1 Fatigue Factors: The student is expected to:
- ✓ identify factors that may lead to driver fatigue.
  - ✓ relate fatigue to risk awareness and effective decision-making.
  - ✓ relate fatigue to other driver physical limitations.
- 2.2 Role of Emotions: The student is expected to:
- ✓ identify emotions which may affect driving performance
  - ✓ relate emotional factors to driving performance
  - ✓ recognize how emotions may play a role in preventing/deterring the driver's attention from the task.
- 2.3 Distracted Driving
- ✓ identify driver distractions as a vision and mental problem
  - ✓ identify factors inside the vehicle that can cause distractions
  - ✓ identify factors outside the vehicle that can cause distractions
  - ✓ identify personal factors that can cause distractions
  - ✓ deal with distractions by;
    - Move focal vision from travel path to another location and back to travel path.
    - Move focal vision within ½ second time frames.
    - Share attention more than one time to allow brain to perceive information.
- 2.4 Aggressive Driving Factors: The student is expected to:
- ✓ identify factors that may lead to road rage.
  - ✓ relate emotions to other driver emotional limitations.
  - ✓ relate emotions to risk awareness and effective decision-making.
- 2.5 Substance Abuse Factors: The student is expected to:
- ✓ recognize the impact of zero tolerance laws.
  - ✓ relate youthful alcohol collision risk involvement to adult alcohol collision risk involvement.
  - ✓ identify the impact of blood alcohol concentrations (BAC) of less than .08% to .10% on driver risk awareness and decision-making.
  - ✓ relate the psychological effects of alcohol on driving task.
  - ✓ relate the physiological effects of alcohol on the driving task.
  - ✓ develop a plan to avoid alcohol and other drug related driving

## Segment II - C 3.0 Classroom Standard Three: Avoiding Collision Threats

The student develops essential knowledge and skills for reduced-risk performances in preventing and avoiding collision threats.

### C.II. 3.0 Avoiding Collision Threats

- 3.1 Driver Actions: The student is expected to:
  - ✓ identify space management practices which may reduce risk and allow time for decision-making.
  - ✓ identify steering actions used to avoid collisions and minimize impact.
  - ✓ identify speed control techniques used to avoid collisions and minimize impact.
  - ✓ identify driver strategies related to using vehicle safety technologies effectively.
- 3.2 Knowing the Vehicle: The student is expected to:
  - ✓ relate vehicle limitations associated with different vehicle types.
  - ✓ relate how tire pressures and traction affect vehicle control.
  - ✓ relate how a vehicle is designed to fit the style of use.
  - ✓ relate how crash test results can influence purchase and driver performances.
  - ✓ relate
- 3.3 Vehicle Actions: The student is expected to:
  - ✓ relate to effects of momentum, gravity, and inertia in personal driving situations.
  - ✓ list and identify the purpose of vehicle safety technology for reducing the collision effects of driver error.
  - ✓ relate the concepts of vehicle understeer and vehicle oversteer to traction loss.
- 3.4 Environmental Factors: The student is expected to:
  - ✓ identify weather related conditions which lead to a need for greater risk awareness and better decision-making.
  - ✓ identify distracting situations which lead to a need for greater risk awareness and better decision-making.

## **Segment II In-car knowledge and skills.**

### **Segment II In-car training.**

The student develops an understanding of the effects of negative reinforcement on driving behavior. The student recognizes the role of driver fitness, mental preparedness, and the effects of alcohol and other drugs. The student develops essential knowledge and skills for reduced-risk performances in preventing and avoiding collision threats. NOTE: Subsequent to successful enrollment in the local driver and traffic safety education course, the student is eligible to start the unrestricted licensing portion of the graduated driver licensing process.

#### **Segment II - IC 1.0 In-Car Standard One: Commentary Driving Assessment**

**IC.II 1.0 Commentary Driving Assessment.** The student is expected to:

- ✓ search for changes to path of travel and line of sight
- ✓ identify high risk situations
- ✓ evaluate methods to reduce driver risk in identified situations.
- ✓ evaluate divided attention tasks needed
- ✓ explain consequences associated driver behaviors and collision factors
- ✓ execute appropriate speed and position adjustments accompanied by appropriate communication

#### **Segment II - IC 2.0 In-Car Standard Two: SEE System Training**

**IC.II 2.0 SEE System Training.** The student is expected to:

- ✓ search for changes to path of travel and line of sight
- ✓ identify high risk situations
- ✓ evaluate methods to reduce driver risk in identified situations.
- ✓ evaluate divided attention tasks needed
- ✓ explain consequences associated driver behaviors and collision factors
- ✓ execute appropriate speed and position adjustments accompanied by appropriate communication

#### **Segment II - IC 3.0 In-Car Standard Three: Commentary Space Management Assessment**

**IC.II 3.0 Commentary Space Management Assessment.** The student is expected to:

- ✓ identify restrictions to the path of travel
- ✓ identify restrictions to the line of sight
- ✓ execute appropriate speed and position adjustments, while checking space to the rear

## Segment II - IC 4.0 In-Car Standard Four: Advanced Collision Avoidance Actions (Off-Road Application)

### IC.II. 4.0 Advanced Collision Avoidance Actions (Off-Road Application).

#### 4.1. Driver Actions. The student is expected to:

- ✓ identify steering actions used to avoid collisions and minimize impact
- ✓ identify speed control techniques used to avoid collisions and minimize impact
- ✓ identify driver strategies related to using vehicle safety technologies effectively

#### 4.2. Vehicle Actions. The student is expected to:

- ✓ relate to effects of momentum, gravity, and inertia in personal driving situations
- ✓ list and identify the purpose of vehicle safety technology for reducing the collision effects of driver error
- ✓ relate the concepts of vehicle understeer and vehicle oversteer to traction loss

### Scope and Sequence of Activities:

Time Period for State Licensing with Parent Practice and Novice Driver Experience					
<b>Seg. II Period One</b>		VIS. 11.0		C. II. 1.0	
				C. II. 1.0	IC. II. 1.0
		VIS. 12.0		C. II. 1.0	
				C. II. 2.0	IC. II. 2.0
		VIS. 13.0		C. II. 2.0	
<b>Seg. II Period Two</b>				C. II. 2.0	IC. II. 3.0
		VIS. 14.0		C. II. 3.0	
				C. II. 3.0	IC. II. 4.0
					IC. II. 4.0

## **Appendix A: Advanced Driver-Assistance System (ADAS) Safety Features**

The following provides a list of ADAS safety features. This is not a comprehensive list but contains the most common ADAS safety features to date.

\*Indicates a safety feature which is most important to cover in the curriculum.

### **Ongoing Safety Features**

- All-wheel drive
- Antilock brakes (ABS)
- Electronic stability control (ESC)\*
- Traction control\*

### **Vehicle Warning System Safety Features**

- Backup or rearview cameras\*
- Backup warning\*
- Bicycle detection
- Blind spot warning\*
- Curve speed warning
- Drowsiness alert
- Forward collision warning\*
- High speed alert
- Lane departure warning\*
- Obstacle detection
- Parking collision warning
- Pedestrian detection
- Rear cross traffic warning
- Side view camera
- Surround view camera
- Temperature warning
- Tire pressure monitoring system

### **Vehicle Assistance System Safety Features**

- Active driving assistance
- Active parking assistance
- Active and passive safety systems (active head restraints, advanced airbags and safety belt pretensions)
- Adaptive cruise control\*
- Adaptive headlights
- Automatic emergency braking\*
- Automatic emergency steering\*
- Hill descent assist
- Hill start assist
- Lane keeping assistance\*
- Left turn crash avoidance
- Remote parking assistance

- Reverse automatic emergency braking\*
- Self-dimming headlights
- Telematics (connected services)
- Traffic jam and queuing assist
- Trailer assistance
- Vehicle to infrastructure communication
- Vehicle to vehicle communication

#### Vehicle Convenience System Safety Features

- Active window/windshield display
- Automatic high beams
- Biometric car access
- Hands-free vehicle door open
- Head-up display
- Keyless entry/start
- Navigation systems and alerts
- Night vision
- Remote vehicle shutdown/start
- Self-parking vehicles
- Three-dimensional gestures
- Voice recognition

### **OR by Categories Recommended by AAA, NSC, CR, JD Power, SAE**

#### Collision Warning

- Blind spot warning\*
- Forward collision warning\*
- Lane departure warning\*
- Parking collision warning
- Rear cross traffic warning

#### Collision Intervention

- Automatic emergency braking\*
- Automatic emergency steering\*
- Reverse automatic emergency braking\*

#### Driving Control Assistance

- Active driving assistance
- Adaptive cruise control\*
- Lane keeping assistance\*

#### Parking Assistance

- Backup or rearview cameras\*
- Surround view camera
- Active parking assistance
- Remote parking assistance

- Trailer assistance

#### Other Driver Assistance Systems

- Automatic high beams
- Driver monitoring
- Head-up display
- Night vision