1 Important Dates

1.1 Competition Dates and Place

August 05, 2009 to August 09, 2009
Formula Student Germany (FSG) will take place in Hockenheim/Germany.

1.2 Registration

January 16, 2009 1300 CET

Registration forms will be accepted in the order which they are received, starting January 16, 2009 at 1300 CET and ending on April 30, 2009 1300 CET or when the 78 car registration limit is reached. Registration will be online at the FSG Website.

1.2.1 Early Registration

January 11, 2009 1300 CET

Early registrations will be accepted in the order in which they are received, starting January 09, 2009 at 1300 CET and ending on January 15, 2009 at 1300 CET, or when 16 teams have registered, whichever occurs first. The registration fee must be paid on-line by PayPal within 72 hours of registration. Registration fees may not be paid by any other means. Registration fees are not refundable. There is no late registration and there are no exceptions to this registration policy.

If all Early Registration Slots are full for one region, additional teams from the same region can register when Official Registration opens on January 16, 2009. All remaining slots that are not used during early registration will then become available for all teams when Official Registration opens on January 16, 2009.

1.3 Structural Equivalency Form

May 01, 2009 1300 CET

IMPORTANT: ALL TEAMS MUST SUBMIT A STRUCTURAL EQUIVALENCY FORM. A blank copy of this form is supplied in FSG Appendix A-A. All teams must use the supplied FSG form. No other form is acceptable.

Structural Equivalency form must be uploaded to the 'My Team' area on the FSG website no later than 1300CET on May 01, 2009.

In the event that the FSG Technical Committee requests additional information or calculations, teams have 14 days from the date of the request to submit the requested information. Teams who miss the SEF deadline by more than 14 days will be de-registered from the FSG 2009 competition.

1.4 Impact Attenuator Data

May 01, 2009 1300 CET

IMPORTANT: ALL TEAMS MUST SUBMIT AN IMPACT ATTENUATOR DATA FORM. A blank copy of this form is supplied in FSG Appendix A-B. All teams must use the supplied FSG form. No other form is acceptable.

Impact Attenuator Data must be uploaded to the 'My Team' area on the FSG website no later than 1300 CET on May 01, 2009.

In the event that the FSG Technical Committee requests additional information or calculations, teams have 14 days from the date of the request to submit the requested information.

Late submissions will be penalized with a 10 (ten) point deduction per day. Teams who miss the IAD deadlines by more then 14 days will be de-registered from the FSG 2009 competition.

1.5 Engineering Design Report and Design Spec Sheet

June 12, 2009 1300 CET

The FSG Engineering Design Report and the FSG Engineering Design Spec Sheet must be uploaded to the 'My Team' area on the FSG website no later than 1300 CET June 12, 2009.

Late submissions will be penalized with a 10 (ten) point deduction per day. All submitted reports will receive a score. Ie.: No reports submitted will result in a score of zero for the Engineering Design Event.

1.6 Cost Report

June 12, 2009

The written Report must *arrive* at the address listed below, no later than June 12, 2009.

Mr. Daniel Mazur
Formula Student Germany
Jasperallee 86
38102 Braunschweig
GERMANY

The parcel or envelope used must be clearly labelled with the Senders University Name and FSG assigned Car Number.

Late submissions will be penalized with 10 (ten) point deduction per day.

1.7 Business Plan Executive Summary

June 12, 2009 1300 CET

The Business Plan Executive Summary must be uploaded to the ‘My Team’ area on the FSG website no later than 1300 CET June 12, 2009. (See FSG Rule 8.2.1).

Late submission or non submission will be penalized at the discretion of the judges up to 5 (five) point deduction. These points deductions will be taken from the Presentation Judging Form.

1.8 Fuel Type Order

July 15, 2009 1300 CET

You must inform FSG which type of fuel you will use no later than 1300 CET July 15, 2009

1.9 Health Insurance Certificate

July 15, 2009 1300 CET

Collect and scan all health insurance certificates of the event participants and upload them as a multiple page Adobe Acrobat® file (*.pdf) no later than 1300 CET July 15, 2009.

2 General

2.1 Formula Student Germany 2009 Rules

The Formula Student Germany (FSG) competition will comply with the Formula SAE® 2009 rules, located here:

http://students.sae.org/competitions/formulaseries/rules/2009fsaerules.pdf

Formula Student Germany does observe some specific rules changes and additions. Those changes and additions are located within this document, which supersede the specific sections of the published Formula SAE® rules for 2009. Any questions or ambiguities concerning the rules for Formula Student Germany will be resolved by the Formula Student Germany Rules Committee.

2.2 Official Language

The Formula Student Germany Official Language is **English**.

2.3 Official Time

The Formula Student Germany Official Time is Central European Time (CET). To convert CET to your local time you may use following website:

http://www.timeanddate.com/worldclock/converter.html

2.4 FSG Registration

2.4.1 FSG Registration Deadline

The registration deadline for Formula Student Germany is listed in the Important Dates section of this document. (Please refer to FSG Rules, section 1.2)

2.4.2 FSG Registration Limit

Registrations will be issued in the order in which they are received. The 2009 Formula Student Germany competition will be limited to 78 teams.

2.4.3 Early Registration for Formula Student Germany 2008 Top Ten Overall Finisher

10 registration slots will be available for the FSG 2008 Top Ten overall finisher teams. Top Ten finishers can be found in Appendix C.

2.4.4 Early Registration for TOP 10 World Ranking Teams

10 registration slots will be available for the World Ranking Top 10 (Ten) teams. The Top 10 ranking which is valid on the day when early registration starts will count. The World Ranking can be found here: http://www.fs-world.org

2.4.5 Early Registration for International Teams

16 registration slots will be available for Overseas Teams and non-German European teams before Official Registration starts. These 16 slots are split into 4 regions as follows:

Region (For Definition of Regions see Appendix B)	Number of Slots
Australasia & Japan	3
Europe (excluding Germany)	5
North America	5
All other World teams (excluding Germany)	3

Definition of the regions can be found in Appendix B.

2.4.6 FSG Registration Fee

The registration fee of 500 Euros (€500) is for a 15-person team. More team members can be registered for 20 Euros (€20) per each additional team member.

2.4.7 FSG Registration Required Information

Once the team has officially been registered for FSG, each team member and faculty advisor is required to add his/her identifying information online. All participants must provide their name and individual emergency contact information.

Participants may only be added (registered) by the team's official contact person (the person who registered the team) until July 1, 2009.

2.5 Society Membership

Students must be a member of a FISITA Organization. (www.fisita.org)

2.6 Faculty Advisor

FSG recommends that all participating teams have a faculty advisor present with them at the competition. In the case of having no Faculty Advisor present during competition, the Team Captain will take over all responsibilities of the Faculty advisor.

3 Vehicle Requirements and Restrictions

3.1 Brake System

3.1.1 Brake System Components mounting (Specific FSG change of Formula SAE® 2009 Part B Rule 14.2)

Nylon lock nuts are not allowed for mounting Brake calipers or Brake discs. All critical bolts, nuts, and other fasteners on the brake system, must be secured from unintentional loosening by the use of FSG approved positive locking mechanisms.

3.1.2 Brake System Master Cylinder actuation

The Brake system Master Cylinder must be direct actuation or actuated by a mechanical connection. The use of Bowden cables or Push Pull Bowden cables is not allowed.

3.2 Engine Lubrication System

The lowest point of the engine lubrication system must be no lower than the lowest frame rail. If the engine oil sump or any other part of the lubrication system is lower than the lowest frame rail, it must be protected by a FSG approved skid plate, or frame tubes installed longitudinally under affected part of the engine lubrication system.

The engine lubrication system must be protected from surface contact in any situation while in operation on track, especially in the event of a suspension failure.

3.3 Fuel System

3.3.1 Refueling

Re-fuelling must be able to be accomplished without the removal of any body parts of the car.

3.3.2 Fuel Tank Visible Access

All fuel lines and electrical connections, which are connected to the fuel tank or parts in the fuel tank, like fuel pumps or sensors, must be clearly visible to the technical inspectors without using instruments such as endoscopes or mirrors. Visible access can be provided by removing body panels or by providing removable access panels.

3.4 Firewall

3.4.1 Non-Metal Material

In case of using a non-metal material for the firewall (i.e. carbon fiber, fiberglass, etc.) a fire resistant heat protection shield with a metal surface must be fitted to the engine side of the firewall.

3.5 Vehicle Identification

3.5.1 School Name (Specific FSG change of Formula SAE® 2009 Part B Rule 16.2)

Following school type abbreviations are accepted. The city name must be written fully.

Technical University - TU + City
University of Applied Sciences – UAS + City
University - Uni + City
Berufsakademie - BA + City

If the university uses a shortcut in their proper name, this shortcut is acceptable + city.

Example:
Real name: Rheinisch-Westfälische Technische Hochschule Aachen -
Acceptable abbreviated name: RWTH Aachen

3.5.2 Technical Inspection Sticker Space (Specific FSG change of Formula SAE® 2009 Part B Rule 16.4)

The technical inspection sticker will be placed on the nose of the car directly in front of the cockpit opening. A space 75 mm tall x 150 mm wide (3" tall x 6" wide) must be made available for this sticker.

3.5.3 Transponders (Specific FSG change of Formula SAE® 2009 Part B Rule 15.2)

Transponders will be provided by FSG. Only FSG provided Transponders will be acceptable for use during the FSG competition.

4 Pit Rules

4.1.1 Electrical Power during pushing

The car must be able to be pushed around with the Primary Master Switch in the OFF position.

4.1.2 Push Bar (Specific FSG change of Formula SAE® 2009 Part D Rule 13.2)

The push bar must be a separate, detachable device. Rear wings will not be acceptable for use as push bar. The push bar must be located behind the rear axle when the car is being moved. One fire extinguisher has to be attached to the push bar by a quick release fastener in an easily accessible position.

4.1.3 Engine running in the pits

Running of engines is not allowed in the pits or the garage areas. There is a designated, supervised, engine running area for this purpose. All engine running is to be conducted in the designated engine running area only. Engine running is allowed only during the active hours of competition. No engines are to be run under any circumstances between the hours of 2000 to 0830.

4.2 Quick Jack

Each team must present a quick jack to lift up the car by using the jacking point during Technical Inspection. The quick jack must be able to lift up rear end of the car, so that the drive wheels are at least 10.2 cm (4 in) off the ground.

5 SEF and IAD Documents

5.1 Structural Equivalency and Structural Equivalency Form

All teams must submit the FSG Structural Equivalency Form , supplied in FSG Appendix A-A.

The use of alternative materials or tubing sizes to those specified in Part B Rule 3.3.1 "Baseline Steel Material" of the Formula SAE® 2009 Rules is allowed, provided they have been judged by a technical review to have equal or superior properties to those specified in Part B Rule 3.3.1 "Baseline Steel Material" of the Formula SAE® 2009 Rules.

Equality must be demonstrated by providing calculation and/or tests results. All calculations must compare the alternative material with S235Jr (Material number 1.0037). The alternative material must have material properties equal to, or superior to, the same attributes of S235Jr.

All formula symbols and abbreviations used have to be defined.

5.2 Impact Attenuator Data

All teams must submit the FSG Impact Attenuator Data Form, supplied in FSG Appendix A-B, along with their test results, description of the test setup, the test equipment used and photo documentation of the IAD before and after the test. The Impact Attenuator Data must be submitted no later than the specified date. (Please see FSG Rules, section 1.4).

6 Technical Inspection

6.1 Inspection & Testing Requirement

Tech Inspectors will mark or seal various different approved parts (i.e. air restrictor, tires, rims etc.). At the FSG event organizor's discretion, the car may be disqualified from any dynamic event, which is found to be using, or substituting unmarked parts. Parts found to have broken seals will be considered the same as being unmarked.

6.2 Car Weighing

All cars will be weighed prior to Engineering Design Judging. All cars are to be weighed in ready to race condition. The fuel tank must be filled to the fuel level line (Formula SAE® Rule 3.5.3.3 Fuel Level Line). All lubricants and coolant must be in the car. This weight will be the car's Official Technical Inspection weight. There will be a points deduction if the car's weight changes during Dynamic Competition. The allowable weight tolerance is ± 5.0 kg. In the case of overweight or underweight in comparison to the Technical Inspection weight, the team will receive a 20 (twenty) point deduction for each kg (or portion of a kg) of additional or missing weight. This point penalty will be deducted from the overall dynamic events combined score. (Each 0.1 to 1.0 kg = -20 points)

Example:

If the car is 5.3 kg underweight: 5.3 kg minus the 5.0 kg tolerance = 0.3 kg equals -20 Points
If the car is 7.8 kg overweight: 7.8 kg minus the 5.0 kg tolerance = 2.8 kg equals -60 Points

If the car weight changes due to replacement of broken parts, the car must be presented for tech inspection (because of the major repairs) and may then be re-weighed. It is the team's

responsibility to have the car re-weighed before entering a dynamic event after changing parts.

7 Dynamic Events

7.1 Dynamic Events and Maximum score (Specific FSG change of Formula SAE® 2009 Part D Article 1)

Skid Pad	75
Acceleration	75
Autocross	100
Fuel Efficiency	100
Endurance	325
Total	**675**

7.2 Skid Pad Scoring (Specific FSG change of Formula SAE® 2009 Part D Rule 6.8.2)

The following equation is used to determine the scores for the skid-pad event:

$$Skid\ Pad\ Score = 71{,}5x\frac{\left(6.184/T_{your}\right)^2 - 1}{\left(6.184/T_{\min}\right)^2 - 1} + 3{,}5$$

Where:
Tyour is the average of the left and the right timed laps on your best run including penalties.
Tmin is the elapsed time of the fastest car

7.3 Autocross Scoring (Specific FSG change of Formula SAE® 2009 Part D Rule 7.8.1)

The following equation is used to determine the scores for the autocross event:

$$Autocross\ Score = 95{,}5x\frac{\left(T_{\max}/T_{your}\right) - 1}{\left(T_{\max}/T_{\min}\right) - 1} + 4{,}5$$

Where:
Tmin is the lowest corrected elapsed time recorded for any competitor in either heat
Tmax is 125% of Tmin
Tyour is the lowest corrected elapsed time in either heat for the team being scored.

7.4 Endurance Scoring (Specific FSG change of Formula SAE® 2009 Part D Rule 7.8.1)

The following equation is used to determine the scores for the endurance event:

$$Endurance\ Score = 275\ x\ \frac{\left(T_{\max} / T_{your}\right) - 1}{\left(T_{\max} / T_{\min}\right) - 1} + 50$$

Where:
Tmin will be the lowest corrected time of the fastest team of the event.
Tyour will be the combined corrected times of both of your team's drivers in the heat.

Tmax will be 1.333 times Tmin.

7.5 Fuel Efficiency Scoring (Specific FSG change of Formula SAE® 2009 Part D Rule 7.8.22 and 7.8.25)

$$Fuel\ Efficiency\ Score = 100x\frac{\left(Fuel\ Efficiency\ Factor_{\min} / Fuel\ Efficiency\ Factor_{your}\right) - 1}{\left(Fuel\ Efficiency\ Factor_{\min} / Fuel\ Efficiency\ Factor_{\max}\right) - 1}$$

$$Fuel\ Efficieny\ Factor = \left(\frac{T_{\min/\ laptotal}}{T_{your\ /\ lapyours}}\right) x \left(\frac{V_{\min/\ laptotal}}{V_{your\ /\ lapyours}}\right)$$

Where:

Vmin is the smallest volume of fuel used by any competitor, whose fulfil Tyour < 1.333 x Tmin
Vyour is the volume of fuel used by the team being scored. Vehicles whose fuel volume exceeds 26 liter/100km, will receive zero (0) points for fuel efficiency.

Tmin will be the lowest corrected time of the fastest team of the event, whose fuel volume will not exceeds 26 liter/100km.
Tyour will be the combined corrected times of the drivers in your heat. Vehicles whose corrected time exceeds 1.333 times the corrected time of the fastest team, will receive zero (0) points for fuel efficiency.

Lapyours will be the number of driven laps, at least 50% of the total endurance distance.
Laptotal will be the number of the full endurance distance.

8 Static Events

8.1 Static Events and Maximum score

Business Plan Presentation	75
Cost Event	100
Engineering Design Event	150
Total	**325**

8.2 Business Plan Presentation (75 Points)

8.2.1 Executive Summary

Judging will start with an Executive Summary before the FSG Competition. The principal document submitted prior to the Business Plan Presentation is an Executive Summary. The Executive Summary must not exceed one (1) page, team name and car number must be written on the Executive Summary. The Executive Summary should contain a brief description of the team's Business Plan. Included in the Summary the two most outstanding technical features of the car have to be listed. The Summary has to include the prototype car costs (as they will be presented to the cost judges) and the anticipated production cost, per vehicle, in a production run of 1000 cars per year.

The Executive Summary must relate to the specific prototype car entered in the FSG competition. The costs of the prototype car entered will not be considered as part of the Business Plan judging.

Even though the Executive Summary is only judged by the presentation judges, all Engineering Design and Cost judges will have access to the file and may refer to it. The Executive Summary must be submitted in Adobe Acrobat® format (*.pdf file) online, no later than the specified date. (Please see FSG Rule section 1.7)

Late submission and non submission will be subject to a point deduction. It is at the discretion of the judges to deduct up to -5 (five) points from the Presentation Judging score.

Note: Consider your Executive Summary to be the first impression of your Business Plan to the Executive Board of a major auto manufacturing company.

8.2.2 Deep Dive Topic

After submission of the Executive Summary the teams will receive a specific deep dive topic from the presentation judges prior the competition. The task will be sent via email on the date specified in the Action Deadlines, to the team's responsible person's email address.

Every team has to present this special deep dive topic in a detailed way as a part of the team's business plan presentation to the judges.

NOTE: A team's business plan presentation does not consist of the deep dive topic only. The deep dive topic is submitted in addition to the business plan presentation.

8.2.3 Data Projection Equipment

Video Projectors will be provided by Formula Student Germany. These Projectors will have VGA Input Connectors.

The organizers will not provide any other presentation equipment needed. Teams planning to use other equipment as a part of their presentation are responsible for bringing or otherwise arranging for their own equipment.

8.2.4 Judging Sequence

At Formula Student Germany the Business Plan Presentation Judging will consist of two parts:

I. Initial judging of all teams

II. Final judging ranking the top 4-5 teams

8.2.5 Scoring Formula

The scoring of the event is based on the average of the two or three presentation judging forms. There is a maximum of seventy-five (75) points from the FSG Presentation Judging Form (Appendix D).

Non finalist:

PRESENTATION SCORE = 70 x (Pyour/Pmax)
Where:
"Pmax``" is the highest score awarded to any team not participating in the finals
"Pyour" is the score awarded to your team

Finalists:

1st Place 75 points
2nd Place 74 points
3rd Place 73 points
4th Place 72 points
5th Place 71 points

It is intended that the scores will range from near zero (0) to seventy-five (75) to provide good separation. The Presentation Event Captain may at his/her discretion; normalize the scores of different judging teams.

8.3 Engineering Design Event (150 Points)

8.3.1 Judging Sequence

At Formula Student Germany Engineering Design Judging will consist of three parts:

I. Initial judging of all vehicles
II. Semi-Final judging ranking
III. Final judging ranking

8.3.2 Engineering Design Report Files. File Format and Size

The Engineering Design Report must be submitted in Adobe Acrobat® format (*.pdf file) online, no later than the specified date. (Please see FSG Rule, section 1.5) The size of the document must not exceed 5MB. A responsibly sized document will be much smaller than 5MB in file size. Please ensure that photos within the Acrobat file are of an appropriate resolution.

8.3.3 Engineering Design Spec Sheet File Format and Units

The Engineering Design Spec Sheet must be submitted in Microsoft Excel® format (*.xls file) online, no later than the specified date. (Please see FSG Rule, section 1.5) The Formula Student Germany Engineering Design Spec Sheet template can be found on the FSG website at:

http://www.formulastudent.de/events/event-2009/rules-important-documents/

The template is for *metric* units only. DO NOT alter or re-format the template prior to submission.

8.3.4 Late submission of Engineering Desin Report and Engineering Spec Sheet

Point deductions for late/non submission of the Engineering Design Reports and/or Engineering Design Spec Sheets will be assigned as follows:

Late arrival of one or both documents: 10 (ten) point deduction for each day.

Failure to submit one or both documents will automatically result in zero points for the Engineering Design Event.

Any and all point deductions will be subtracted from your team's final Engineering Design Scores. The minimum allowable Engineering Design Score will be 0 Points. (Points will not go negative.)

8.4 Cost Event (100 Points)

8.4.1 Cost Event Scoring (Specific FSG change of Formula SAE® 2009 Part C Rule 3.7)

The points for the Cost and Manufacturing Event will be broken down as follows

$20\ x\ \frac{(P_{max}/P_{your})-1}{(P_{max}/P_{min})-1}$	20 Points	Lowest cost - each of the participating schools will be ranked by total adjusted retail cost from the BOM and given 0-20 points based on the formula on the left. P_{your} is the adjusted cost of your car and P_{min} is the adjusted cost of the lowest cost car. P_{max} is the cost of the most expensive car.
	40 Points	Real Case Situation – Teams will receive a task covered a "Real Case in Industry"
	40 Points	Event Day/Visual Inspection - The cars will be reviewed for part content and manufacturing feasibility. The submitted process descriptions will be discussed.
Total	**100 Points**	

8.4.2 Late submission of Cost Report (Specific FSG change of Formula SAE® 2009 Part C Rule 5.15)

Teams that submit reports later than the specified date will be subject to a points deduction. This will result in a 10 (ten) point deduction per working day. The maximum amount for a late submission is 80 (eighty) points. Teams that do not submit a Cost Report will receive 0

(zero) points for the Cost & Manufacturing Analysis score. The minimum allowable Cost Event score will be 0 (zero) points. (Points will not go negative)

8.4.3 Addenda (Specific FSG change of Formula SAE® 2009 Part C Rule 5.15)

For changes in your corrections made after the submission of the cost report please use the FSG cost addendum form given in the Appendix E. For all new parts, which are manufactured, a drawing must be attached to the addendum form.

8.4.4 Cost Report Penalties Process (Specific FSG change of Formula SAE® 2009 Part C Rule 5.17)

Only points deduction method A will be used for FSG, described in Part C Rule 3.18 “Penalty Method A- Fixed Point Deductions” of the Formula SAE® 2009 Rules. The Formula SAE® 2009 Rules 3.19 “Penalty Method B – Adjusted Cost Deductions” is not valid for the FSG competition.

Appendix B - Regions and Countries

Australia and Japan	Australia, New Zealand, Japan
Europe	Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Vatican City State
North America	Canada, United States of America, Mexico
All other World teams	All countries not listed above

Appendix C – TOP 10 Winning Teams from FSG 2008

1	Delft TU
2	Braunschweig TU
3	Graz TU
4	Wien TU
5	Hatfield UH
6	Montreal ETS
7	Darmstadt TU
8	Helsinki PT
9	Hamburg UAS
10	Toronto U

Appendix D - PRESENTATION JUDGING

School:_____ Car#_____

_____ **5 points - Executive Summary:** written, team has to hand in a summary (1 page) of their business plan. Does the Executive Summary give a good overview of the team's business plan?

_____ **20 points - CONTENT**: Were the concepts presented appropriate and adequate to explain how the car meets the intent of the customer? Were enough technical details presented without being boring?

_____ **10 points - ORGANIZATION**: Were the concepts presented in a logical order progressing from basic concept and showing how the engineering accomplished the concept? Was it clear to the audience what was to be presented and what was coming next? Were distinct introduction and overviews as well as summary and conclusions given?

_____ **10 points - VISUAL AIDS**: Were visual aids used or clear visual references made to the car? Were the illustrations visible for all of the audience?

_____ **10 points - DELIVERY**: Did the presenter speak in a clear voice? Did the presenter show enthusiasm and promote confidence in the technical aspects? Did he maintain eye contact?

_____ **10 points - Deep Dive Topic:** Was the deep dive topic described in a detailed and understandable way?

_____ **10 points - QUESTIONS**: Did the answer illustrate that the team fully understood the question? Is there doubt that the team understood the answer? Did the team promote complete confidence in their response to the questions?

_____ **TOTAL = PRESENTATION POINTS (75 points maximum)**

COMMENTS:

Appendix E - COST EVENT ADDENDUM

School:_____ Car#_____

	Section	Original Reported Total	New Reported Total	Difference	Drawing No.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

TOTAL VEHICLE

Summary of differences listed above. Attach fully detailed Costed Bill of Material forchanges and Drawings.			

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Accepted by:	_____	Entered by:	_____
Date:	_____	Date/Time:	_____

Addendums will be accepted only at the time of registration on-site at the competition!
These forms will then be forwarded to the cost judges the morning of the cost event.

Formula Student Germany - Appendix A-A

STRUCTURAL EQUIVALENCY FORM

This form must be completed and submitted **no later the date specified** in the Action Deadlines. The FSG Technical Committee will review all submissions which deviate from the FSAE® and FSG rules for Roll-over or Side Impact Structure. This form must also accompany the vehicle to Technical Inspection.

Structural Equivalency Forms (SEF) and supporting calculations must be submitted electronically in Adobe Acrobat Format (*.pdf) and must be upload on the FSG-Website.

In the event that the FSG Technical Committee requests additional information or calculations, teams have **14 days** from the date of the request to submit the requested information.

Late submissions will be penalized with -10 (ten) points per day.

Contact Details

Car Number

University Name

Team Contact Person

Last Name, First Name

Telephone Number

E-mail Address

Rule Deviated?

(ALL teams must answer this question.)

◯ YES, rule(s) deviated ◯ NO, chassis is compliant to the rules

Check all that apply:

- ☐ 3.10 Main Roll Hoop Material
- ☐ 3.10.6 Main Roll Hoop Attach. to Monocoque
- ☐ 3.11 Front Roll Hoop Material
- ☐ 3.12 Main Roll Hoop Bracing
- ☐ 3.13 Front Roll Hoop Bracing
- ☐ 3.14 Monocoque Bracing Attachment
- ☐ 3.16 Mechanically Attached Roll Hoop Bracing
- ☐ 3.18 Front Bulkhead
- ☐ 3.18.4 Monocoque Front Bulkhead
- ☐ 3.19.4 Front Bulkhead Support
- ☐ 3.19.5 Monocoque Front Bulkhead Support
- ☐ 3.20.3 Impact Attenuator Attachment
- ☐ 3.20.6 Impact Attenuator Anti-intrusion Plate
- ☐ 3.24 Tube Frames Side Impact Structure
- ☐ 3.25 Composite Monocoque Side Impact
- ☐ 3.26 Metal Monocoque Side Impact
- ☐ 5.2.2 Monocoque Safety Harness Attach.
- ☐ 5.4.4 Shoulder Harness Bar

Attach Proof of Equivalency

Roll bar documentation should include material type(s), material certification(s), properties, heat treatment, and strength calculations showing equivalency. Side impact documentation should include material type(s), material certification(s), properties, heat treatment, cloth weights, resin type, fiber orientation, number of layers, core material, lay-up technique, and strength calculations showing equivalency.

Formula Student Germany - Appendix A-B

IMPACT ATTENUATOR FORM

This form must be completed and submitted **no later the date specified** in the Action Deadlines. The FSG Technical Committee will review all submissions which deviate from the FSAE® and FSG rules for Impact Attenuator. This form must also accompany the vehicle to Technical Inspection.

Impact Attenuator Form (IAF) and supporting calculations must be submitted electronically in Adobe Acrobat Format (*.pdf) and must be upload on the FSG-Website.

In the event that the FSG Technical Committee requests additional information or calculations, teams have **13 working days** from the date of the request to submit the requested information.

Late submissions will be penalized with -10 (ten) points per working day.

Contact Details

Car Number	
University Name	
Team Contact Person	
Last Name, First Name	
Telephone Number	
E-mail Address	

Attach Proof of Impact Attenuator